MONDAY, JANUARY 15, 1872.

ORIGINAL LECTURES.

CLINICAL LECTURE
ON A CASE OF SMOOTH WHITE KIDNEY.

BY JAMES TYSON, M.D.,

Clinical Lecturer on Diseases of the Urinary Organs in the University of Pennsylvania; one of the Physicians to the St. Joseph's Hospital, etc.

GENTLEMEN,—Since our last meeting the fatal termination of one of the cases we have been studying during the past two months has enabled us to complete its record; while the post-mortem appearances, in connection with the unusually complete history which has been obtained, will afford us a text for what I hope may not be unprofitable discussion. That you may the better recall the points of the case, I will read the connected notes.

John G., white, aged eighteen, is an upholsterer. When six years old, he had scarlet fever, followed by dropsy. This apparently disappeared under treatment, and he remained in moderately good health for six or eight years. About two years ago (July, 1869) he suffered from a second attack of dropsy, attended with much swelling of the legs and face. He had no fever, but his urine was scanty and often dark in color. No sufficient cause can be found for this last attack. He states that he had taken a bath but a short time before it came on, but was not overheated at the time. He was treated by several physicians, under whom he improved.

He first came to the University of Pennsylvania May 13, 1870, when his legs and feet were œdematous. His appetite and digestion were good. He was placed upon the solution of the acetate of iron. Under this treatment his general condition improved much, the œdema disappeared, and the albumen diminished, but remained considerable.

On March 23, 1871, he again presented himself at the clinic, when the following note was made: He complains of a sense of languor and weakness, and of being unfit for any bodily exertion; he also often feels chilly, and his feet and hands are cold. There is no œdema about the eyes, but that of the legs remains slightly,—is barely appreciable. He states that his legs become much more swollen at night. His appetite and digestion are good, and he has had no headache or convulsions. His urine is abundant, constantly amounting to sixty ounces in the twenty-four hours, and occasionally even to ninety ounces during this period; it is pale in color, and on standing a white flocculent deposit falls, forming about one-twentieth of its bulk. The sp. gr. is 1008; the reaction is slightly acid. On heating and adding muriatic acid, a considerable deposit of albumen takes place,—equal to about one-fourth of the quantity tested. Microscopical examination of the urine shows granular and hyaline casts. Occasionally an imperfect epithelial cell or a few oil-drops are contained in a cast otherwise hyaline. He is ordered gallic acid, gr. v, three times a day, with acetate of iron in the form of Basham's mixture.

May 4.—The gallic acid was afterwards increased to gr. xv three times a day, and again to gr. xv four times a day. The œdema disappeared entirely, and his general condition constantly improved, but the state of his urine as to the quantity of albumen and presence of casts remains unchanged. At this time he is feeling quite well, but weak; there is no dropsy; the albumen has diminished to one-eighth the bulk of the urine tested.

On May 14 epistaxis occurred, and continued two hours. On the 19th it recurred, and continued also two hours; and at 7 P.M. of this day it again recurred, and continued until 2 A.M. of the following morning. It was thought he lost at least a pint of blood. In these attacks, and after them, he complained greatly of præcordial pain. Physical examination revealed the heart beating powerfully,—frequently, but regularly: it was evidently hypertrophied. The sounds of the heart were not typical, but there were no deviations which could not be accounted for by existing hæmal changes. At this time the face was evidently swollen, but there was no appreciable œdema of the extremities. The acetate-of-iron mixture, which had been continued for some time, was now substituted by tincture of the chloride of iron and infusion of quassia; the gallic acid had been discontinued earlier.

A microscopic examination of the urine on the morning of the 22d of May revealed, in addition to the black highly-granular casts, an occasional apparently *solid* or cylindrical cast, of large size, and, therefore, probably from a tubule empty of epithelium.

On the evening of the 26th, epistaxis recurred, and continued four hours, but was not very abundant. The præcordial distress was intense and the breathing labored, but the chest was resonant throughout, and nothing except the secondary cardiac affection could be discovered. He remained thus until the 28th, when the only convulsion he ever had occurred, in which he died, aged nearly nineteen years. His urine had been sufficiently copious until within forty-eight hours before his death, when it was partially suppressed.

A *post-mortem* examination, obtained only on condition that nothing should be removed, was made forty-six hours after death. The body presented no external peculiarities. The pericardium contained the normal amount of serum. The *heart* was enlarged, weighing thirteen and a half ounces, which, in a boy of nineteen, was considerable; the walls of the left ventricle were thickened, and the muscular structure was firm throughout the organ. The *semilunar valves of the aorta* and the *mitral valves* were markedly *thickened*, but there appeared no insufficiency, the hydrostatic test however not being applied; the valves of the right side of the heart were normal. The *lungs* were entirely healthy; there was little pleuritic adhesion and no effusion. There was no ascites. The *liver* was somewhat enlarged, and firm. The *spleen* was quite normal. Not the slightest fragment was allowed to be taken away, so that no microscopic study of the tissues could be made, but the gross characters were sufficiently distinctive. The *kidneys* were perfect examples of the *smooth white kidney:* the left weighed five ounces; the right was perceptibly larger, and weighed six ounces; they could not, therefore, be said to be enlarged, even when his age is taken into consideration, if the normal weight of the kidney of the male be placed at four and a half to six ounces (Reid). The right might perhaps be said to have been slightly enlarged; the left certainly not. On section, the normal relation of the convoluted to the straight portion seemed nearly preserved, but the former contrasted strongly in its almost pure white with what was about the normal tint of the straight tubes. The capsule was not unduly adherent.

Though no microscopic study of the kidneys could be made in this case, on account of the rigid adherence insisted upon by the friends of the patient to the promise we had made to remove no portion of the body, the gross appearances were unmistakably distinctive, and the minute characters of the smooth white kidney are well known. They consist in a plugging up and distention of the uriniferous tubules, especially in the convoluted portion, but sometimes also in the straight parts, by granules and occasionally globules of fatty matter. This granular matter is situated in the epithelial cells lining the tubules, where these are still present, but in many portions no trace of distinct cells is discernible, and the tubules seem choked up with black opaque granules. In this case these streaks could be traced with the naked eye, and I have no doubt would have exhibited, under the microscope, a composition of the kind indicated. In addition, perhaps, to containing in parts, at least, these same granular elements, the straight tubes undoubtedly contained, in certain situations, rods or hollow cylinders of transparent fibrine, since it will be recollected that these transparent casts were found in the later microscopic examinations of the urine. The Malpighian corpuscles are, of course, distended by the obstruction of the tubes below them, but otherwise are little changed.

I desire further briefly to ask your attention to the following points of interest in this case:

First, the *duration of the disease*. This undoubtedly extended from the time at which he had scarlet fever, at six years of age, to that of his death, at nineteen,—over a period, therefore, of thirteen years. For, late in his illness, his father informed me that during the six or eight years of apparent freedom from active disease there were frequent recurrences of swelling of the face. This would generally disappear without treatment, so that no significance was attached to it; though it was undoubtedly the symptom of a continuous kidney affection. Such a duration is quite unusual in this form of renal malady, but, on the other hand, is characteristic of the contracted granular organ.

Second, the *epistaxis*, which was most obstinate, calls for a brief allusion. This also occurs more frequently in the course of the contracted kidney, and is comparatively rare in the form of Bright's disease under consideration. But the cause of epistaxis in these cases is undoubtedly an altered state of the blood, and, secondarily, an impaired local nutrition, dependent upon such impoverishment. And wherever a renal affection is of sufficient duration, such a condition must ultimately result, whatever the special form of the disease; so that its occurrence in this case should not be looked upon as altogether anomalous, but rather as something to be expected wherever such alterations exist in the vital properties of the chief nutrient fluid.

A third point of interest—and, indeed, of unusual interest—was the *hypertrophy of the left side of the heart*. With regard to the occurrence of this symptom, we have the most explicit statements. Thus, Dickinson* says, "It is very rarely that simple hypertrophy of the left ventricle is associated with any form of renal disease except granular degeneration. I have never seen an instance, although I am not prepared to say it never happens." T. Grainger Stewart,† however, found it in thirty-eight per cent. of those dying in what he terms the second or fatty stage of the inflammatory form of Bright's disease, in which he includes cases of the "smooth white kidney."

When you remember, however, the cause of this hypertrophy, its presence need not be a matter of surprise to you. This cause is identical with what you have already learned to be the cause of the epistaxis,—a poisonous impurity of the blood, which necessitates increased activity and consequent hypertrophy of the propelling organ; and the resulting hypertrophy as well as the resulting epistaxis will occur wherever the disease is sufficiently prolonged, as in the present case.

It is not unreasonable to suppose that the probable secondary cause of hypertrophy in cases of contracted kidney—resistance to the passage of blood through the organ—was also efficient in this instance. For if you will but recall the description which I have just given you of the minute changes in an organ thus involved, you will readily perceive that the distended tubules, together with the adventitious granular matter between them and between the capillaries, must seriously encroach upon the calibre of the latter, thereby interfering with the progress of the blood through the organ.

The commonly short duration of cases of "smooth white kidney" amply accounts for the great rarity of hypertrophy in this form of disease as compared with the contracted organ, and partially also for the otherwise unaccountable discrepancy in the statements of Dickinson and Stewart.

Again, the slight degree of valvular disease here present has the same cause. That it was in no way instrumental in bringing about the renal malady is evident from its slight extent, the early approach of the latter disease, and the fact that valvular disease of the heart, although an efficient agent in producing a chronically-contracted kidney, is never a cause of this form of Bright's disease.

As you are aware, we were not entirely satisfied of the correctness of our diagnosis in this case. The mode of origin of the disease (as a sequel of scarlet fever) and the quantity of albumen pointed to the smooth white kidney, while the duration of the affection and the cardiac hypertrophy suggested the contracted organ. The œdema was more persistent than in the latter form of disease, but during much of the time while the patient was under treatment was almost entirely absent. In this instance the casts did not afford as much assistance as they sometimes do. It will be recollected that there were forms granular in various degree, among which were those containing dense aggregations of black granules; hyaline casts both of the transparent almost invisible form and of the solid cylindrical shape; casts containing oil-drops, and casts containing an occasional epithelial cell generally fatty; there were also present compound granule-cells. Thus, every form was included except the typical epithelial-cast, the blood-cast, and the highly-fatty oil-cast, while no single form seemed to predominate. In reviewing, however, these forms, the utter absence of healthy epithelium, and the presence in greater abundance than is usually the case in the contracted organ of compound granule-cells and more irregular and smaller aggregations of fatty granules within the casts, together with the absence of free oil and intra-tubular oil in large quantity, pointed to the presence of the "smooth white kidney."

Let me add a few words with regard to the relative pathological position of these cases of smooth white kidney. You will perhaps be able to recall‡ the classification I prefer to adopt. Dividing Bright's disease into the acute and chronic forms, I would include in the former acute nephritis, whether scarlatinal or idiopathic; and of the chronic I make three subdivisions,—the fatty, granular (contracted), and albuminoid conditions. The fatty form, I have said, might originate in two ways, either as a sequel or continuation of the acute form into what is often called chronic inflammation, although all inflammation has generally subsided, or it may arise primarily as the result of a defective nutrition. Now, the *fatty kidney* is again distinctly divisible into two forms,—the *smooth white kidney* and the *large yellow fatty kidney*. The former is the more common sequel of acute Bright's disease, especially of the scarlatinal type. It is smooth, white, firm, not always much enlarged, as in the case under consideration. On section, the convoluted or cortical portion is white, contrasting strongly with the normally-preserved pink of the straight tubes or medullary structure. The width of the convoluted portion is often increased, yet not necessarily so, as was shown also in the present instance. The tubes are choked with so-called "exudation matter,"—probably the granular débris of epithelial cells. Generally fatal within three or four years, it is said by Dickinson and Stewart to be amenable to successful treatment. I have never seen a case of recovery, although I have seen the strength and general health of a patient temporarily restored while the urine still gave evidence of the existence of the disease; and that the duration may exceed the usual period is evidenced in the case we are now studying,—lasting apparently thirteen years. Dropsy is generally persistent, though less

* Dickinson, Pathology and Treatment of Albuminuria, p. 130, edition of William Wood & Co., New York, 1868.

† Bright's Diseases of the Kidney, p. 42, edition of William Wood & Co., New York, 1868.

‡ See a paper, by the writer of the present article, on the Pathology, Diagnosis, and Prognosis of the Different Forms of Bright's Disease of the Kidney, in Nos. 15 and 16 of the *Medical Times*, May 15 and June 1, 1871.

marked than that attending the large yellow fatty kidney, and the quantity of albumen, though considerable, is apt to be less: highly-granular casts, granule-globules, fatty epithelium in not very great abundance, are apt to be present with a pale, moderately abundant urine of low sp. gr. (1008). I believe it may succeed acute idiopathic nephritis as well as that following scarlet fever, but that very seldom if ever does it originate independently of previous acute inflammation.

The *large yellow fatty kidney* is more evidently fatty to the naked eye, is more apt to be yellowish in hue, and to be mottled by yellow fatty and red vascular spots. Oil is abundant in the tubules and their lining cells, and may be expressed. Dropsy is marked and persistent, and the quantity of albumen very large; the urine is apt to be less in quantity than that attending the smooth white kidney, is of higher sp. gr. (1015 to 1030), and contains numerous oil-casts, fatty epithelium, and free oil. The malady is invariably fatal, and generally within a year after its detection.

This form of fatty kidney, Dr. Dickinson thinks, is more frequently a sequel of the acute nephritis following exposure to cold than of the scarlatinal nephritis. I know not why it should not succeed scarlatinal nephritis; though I have never known it to do so. I believe it may originate primarily, especially in the intemperate. I have seen a case which I believed to have originated in this way, in the driver of a beer-wagon. The drivers of these wagons perhaps consume more spirituous liquors than any other set of laborers, because they are expected to invite the purchaser of every cask delivered to drink with them,—and whiskey is generally taken. The relation of the use of alcohol to renal disease is an interesting subject, with regard to which I will only say in this connection that less importance is attached to it than formerly, and that where such relation exists the tendency is to the production of fatty change in the kidney rather than to granular degeneration, as was once thought.

ORIGINAL COMMUNICATIONS.

CONTRIBUTIONS TO THE PHYSIOLOGICAL ACTION OF GETTYSBURG AND ADIRONDACK WATERS.

BY ISAAC OTT, M.D.,

Easton, Pa.

THE conclusions in the following paper are founded on a series of experiments which will be published in detail at some other time. The means employed were the same as those described in a paper on Congress water, published in No. 19 of the *Medical Times*.

GETTYSBURG WATER.

The observations were made during a period of six days. The quantity and quality of food and drink were nearly similar during the whole period, except that four hundred cubic centimetres of bottled Gettysburg water were taken early in the morning, before breakfast, in the last three days. The amount of sleep was the same, as was also that of exercise, although the intensity of the exercise on the afternoon of the second of the Gettysburg-water days was considerably greater than on normal days. The average temperature on normal days at three fixed periods was 60°, 64°, and 62° F., while the barometric mean at similar periods was 29.5, 29.5, 29.5. On Gettysburg-water days, the average temperature at similar periods as on normal days was 51°, 54°, and 52° F.; the barometric mean at the same periods was 29.6, 29.4, and 29.3.

On Gettysburg-water days the daily average excess of all egesta over those of normal days from 6 A.M. to 12 M. was 335.96 grammes; from 12 M. to 6 P.M. the daily average decrement was 31.8 grammes; and from 6 P.M. to 6 A.M. the daily average increment was 2.9 grammes, making the total daily average excess of all egesta 307.0 grammes. On Gettysburg-water days the daily average excess just mentioned from 6 A.M. to 12 M. was made up of increase of "insensible perspiration" 24.06 grammes, of renal excretion 333.9 grammes; the intestinal excretions were diminished 22 grammes; the daily average decrease from 12 M. to 6 P.M. was formed of an increase of "insensible perspiration" 105.8 grammes, and a decrease of renal excretion equal to 118.05 grammes, and of intestinal excretion 19.6 grammes; the daily average increase of excretion from 6 P.M. to 6 A.M. was made up of a decrease of insensible perspiration 64.9 grammes, and an increase of renal excretion 67.8 grammes. The excretion of urea for the three normal days was 31.17, 29.53, and 32.96 grammes, the arithmetic mean of which is 31.22 grammes. The ureal excretion on Gettysburg-water days was 32.07, 29.72, and 32.14 grammes, the arithmetic mean of which is 31.31 grammes, thus showing an increased daily excretion of urea by .09 grammes. On the days when Gettysburg water was ingested there was a daily decrease of uric acid .065 grammes, of phosphoric acid .09 grammes, of chloride of sodium 1.27 grammes, and a daily increase of sulphuric acid .47 grammes. There was a relative increase during the use of Gettysburg water, and the most reasonable explanation of the increase seemed to be the retention of water. Thus it would appear that the retention of water whilst Congress water is being taken is not unique as regards our own economy.

ADIRONDACK WATER.

The observations on the physiological effects of this water extended over six days. The food was nearly the same in quantity and quality; exercise, sleep, study, and so on were as similar as possible. The drink was the same in quantity and quality in exact series of days, except that six hundred cubic centimetres of bottled Adirondack water was taken half an hour before breakfast during the last three days. The average of the temperature on normal days at three fixed periods was 63°, 64°, and 58° F., while the barometric mean at the same periods was 29.7, 29.6, and 29.6.

On Adirondack days, at similar periods, the average temperature was 60°, 64°, and 55° F.; the barometric mean 29.8, 29.7, and 29.7. The daily average excess of all the excreta during the ingestion of Adirondack water over those of normal days, from 6 A.M. to 12 M., was 552.3 grammes, from 12 M. to 6 P.M. 58.5 grammes, while from 6 P.M. to 6 A.M. there was a decrease of 131.3 grammes: thus making a total daily excess of all excreta 479.5 grammes. The aforementioned excess of excreta from 6 A.M. to 12 M. was made up of an increase of insensible perspiration 68.86 grammes, and of renal excretion 496.78 grammes, and a decrease of intestinal excretion 13.4 grammes; from 12 M. to 6 P.M. the excess was derived from increase of insensible perspiration 109.38 grammes, a decrease of renal excretion 90.40 grammes, and an increase of intestinal excretion 39 grammes; from 6 P.M. to 6 A.M. the decrease was made up of an increase of insensible perspiration 13.36 grammes, and a decrease of renal excretion 144.75 grammes. The urea excreted on the three normal days was 19.42, 20.91, and 16.07 grammes, the arithmetic mean of which is 18.80 grammes. On Adirondack days the urea amounted to 20.37, 19.05, and 18.64 grammes, the arithmetic mean of which is 19.35 grammes,—thus showing a daily increase of urea .55 grammes. On Adirondack days the daily average increase of sulphuric

acid was 1.11 grammes, of phosphoric acid .04 grammes, of chloride of sodium 1.64 grammes. While there was a daily decrease of uric acid .176 grammes, there was also a relative increase of weight on Adirondack-water days, which seemed, as in the cases of Congress and Gettysburg water, to be most logically accounted for by the retention of water, although during the experiments with the latter two the retention was in the afternoon, while during those with the Adirondack water it was mainly at night.

PROTRACTED GESTATION AND LABOR, COMPLICATED WITH PUERPERAL CONVULSIONS.

BY E. P. BERNARDY, M.D.,
Philadelphia, Pa.

ABOUT the 1st of August, 1871, I was requested to examine Mrs. E. K., æt. 18, married two years, and who had been regular in her menstrual periods up to the 20th of November, 1870. At the following period, December, 1870, no sign of menstruation had occurred. I found that two hundred and fifty-four days had elapsed since her last period, and placed her expected time at September 1 to 10 of the present year (1871). The time having arrived, there was no sign of labor, her only complaint being, "I am tired; I wish it was all over." On the 22d of October general anasarca set in. On the 26th Dr. K. Gilbert was called in consultation. He advised waiting a few days. On the 30th of October, labor set in at 5 A.M. Being called at 7 A.M., after delay, I made an examination, when I found the os dilated to about the size of a silver quarter of a dollar, and the head presenting, but was unable to make out the position. I was again sent for at 3½ P.M. At four and a half o'clock, I found the pains very slight, but the os dilating. At five o'clock, the bag of waters ruptured, and I diagnosed the sixth position, the occiput being towards the promontory of the sacrum. While I was making the examination, the patient went into convulsions. Her face became at once livid, her lips and tongue perfectly black. I sent for Drs. K. Gilbert and C. Merklein, and in the mean time I attempted to bleed, but without success. I applied the forceps, but could not move the head. Dr. Merklein having arrived, another attempt was made to bleed, but the vein was almost severed before blood could be drawn; and when it did flow, it flowed slowly, having the appearance rather of thick, black molasses than of blood. Only three ounces were obtained. The convulsions still continuing, the patient was chloroformed, the forceps were reapplied, and, after some trouble, the head was delivered,—the child, a male, being stillborn.

The mother continued in convulsions up to four o'clock the next morning, having thirty-three convulsions in the space of little over nine hours. She remained two days unconscious, and on the morning of the third day, recognizing me, she asked for her babe, speaking for the first time intelligently since the night of her delivery.

In the short space of eight hours three drachms and two scruples of the hydrate of chloral were given. It was only after eight scruples had been taken that the medicine seemed to quiet her. After taking the ninth scruple she fell into a light sleep for half an hour, waking up in convulsions. Another scruple of the hydrate was then given, which gave her a sleep of an hour and a half, which was again interrupted by convulsions. The hydrate (℈j) was again repeated, with the effect of producing a sleep of five hours, after which the convulsions were completely arrested. In conjunction with the hydrate of chloral, carbonate of ammonia, bromide of potassium, whiskey, and mustard-plasters were used.

The child was enormous, weighing fifteen pounds, and, when dressed, appeared as if it were three months old instead of a few hours. The proportions of the head were as follows:

Circumference	15 inches.
Occipito-mental diameter	8 "
Fronto-mental "	4½ "
Occipito-frontal "	6¾ "
Length of the body	26½ "
Weight of the body	15 lbs.

There is no doubt whatever of the above case being one of protracted gestation. The last time the patient had her menstrual flow was on the 20th of November, 1870, since which time she has seen nothing; therefore our estimate commences from the 20th of November, 1870, which would put her expected time of labor at about the 1st of September, 1871, making ten lunar months; but, instead, she carried till the 30th of October, or about three hundred and forty-four days.

The case is also interesting as showing how much hydrate of chloral can be given in convulsions without any bad effect. As above stated, eleven scruples (220 grains) were given in the short space of eight hours; the medicine seemed only to quiet her. There was no deep sleep, the patient being easily wakened. There is no doubt that the preparation was of the best quality, the medicine being furnished by Messrs. Samuel Campbell & Co.

The patient is now (November 25) able to attend to her household duties.

[The above communication comes to us from a responsible source, and is therefore published; but we cannot agree with the writer of it in thinking that the child was carried so long a time as three hundred and forty-four days. By the French and Scotch law a child is declared illegitimate if born more than three hundred days after the death or absence of its reputed father. Liegard has reported one case in which the gestation is said to have been protracted up to three hundred and thirty days; but this is, to say the least, doubtful. It seems infinitely more probable that the woman in the case reported above made a mistake in her calculation,—no uncommon circumstance, by the way,—and that conception did not take place until a period long subsequent to November 20.—ED.]

MUCOUS CASTS OF THE INTESTINE.

BY WILLIAM C. KLOMAN, M.D.,
Baltimore, Md.

ON November 20, 1871, I was sent for to see a young woman, aged about thirty, who was very much alarmed at having passed some long, gelatinous bodies, which she supposed were "worms" partially decomposed. She stated that several days before she had passed similar bodies, but took no further notice of them, and it was only their recurrence that excited alarm. She had no special complaints to make of feeling unwell: the passage of the bodies had caused pain. Her appetite was good; tongue clean; no febrile symptoms; bowels constipated. These bodies were passed by themselves, no fecal masses accompanying them. Deep pressure over each iliac fossa elicited tenderness. There was nothing like tenesmus and no frequent calls to stool. She exhibited to me about as much as could be held in the two hands of what I recognized by the naked eye as cylinders of a clear, vitreous, tough mucus. Two of these cylinders were twelve to fourteen inches long, with some shorter pieces, and they varied in thickness, being in places as thick as the thumb, but generally somewhat less. I prescribed for her a purgative dose of mass. hydrarg. with ext. colocynth. comp., and a draught containing potassæ bicarb. with tinct. colomb., each dose containing fifteen grains of the former and one drachm of the latter, to be repeated every four hours. The cylinders I took with me for microscopic examination. They proved to consist of a tough mucus. They contained also delicate fibrils, mucus-corpuscles, some scales of pigment, and an abundance of columnar epithelium.

The purgative dose acted freely, and my patient has

passed no similar masses since. She seems to be entirely relieved, there being no longer any tenderness on pressure.

Beale, in his work on "The Microscope in Clinical Medicine," third edition, Lindsay & Blakiston, p. 195, mentions a somewhat similar case, except that in the case under my care the cylinders were not hollow, but, as far as I could judge, were solid. Neither was there the long-persistent pain before passing the casts.

I exhibited the casts and related the case at the last meeting of the Baltimore Pathological Society, and found that none of the gentlemen present had had any similar cases under their care.

AN OBSTINATE CASE OF TETANUS.

BY GEORGE McCLELLAN, M.D.,

Philadelphia.

T. K., an Irish boy, nine years of age, was run over by a car on the Reading Railroad on the 21st of September, 1871, his foot being severely lacerated. Two days after, when I saw him for the first time, there was mortification of the toes, with indications of its tendency to spread over the whole foot. Carbolic acid was applied, and opiates were given to relieve the pain, which was excessive in the ankle. In a week's time the mortification was checked, and, granulations beginning to appear, the boy was placed under the influence of ether. An examination of the foot was made, with the expectation that it would be necessary to amputate it. It was found that the bones were sound, with the exception of the external malleolus, which had had a piece slivered off of it, and, although the injury to the soft parts was extensive, it was thought best to endeavor, if possible, to save the foot. Tonics and nutritious diet were administered. Every means calculated to promote healthy action was resorted to, but on the third day after the examination symptoms of locked-jaw began to appear in the little patient, whose nerves had been in an overstrained condition ever since the shock of the accident.

He had always been hard to govern, and now became more unmanageable than ever; but the nervous tension had begun to abate a little, when, in a fit of restlessness, he tossed the injured limb against the side of the bed. Frequent poultices had been used to keep up a full discharge from the wound, and of course the tissues were softened. The sudden blow threw him into a paroxysm of pain, and, the integument being wanting, the ligaments about the ankle snapped asunder. By the spasmodic action of the tibialis posticus and the flexor longus muscles, the foot immediately assumed that form of deformity known as *talipes varus*.

Opisthotonos with locked-jaw ensued, and persisted in spite of every remedy. The locked-jaw and muscular rigidity of the neck yielded a little after the fifth day, but with this exception there was not the slightest relaxation until the expiration of the twenty-fifth day. At first, hot baths and external applications along the spine were employed without any effect; but the patient's inability to take any nourishment made the case seem hopeless. By persevering, however, from day to day, life was prolonged. Neither the tincture of cannabis indicus, nor Calabar bean, nor opiates, proved of any avail in diminishing the tetanus. The mistura assafœtidæ and bromide of potassium and the much-recommended chloral were equally unsuccessful. The bowels were moved by oil, and nitre was given to clear the urine. He was permitted to take any kind of food, without discrimination. As soon as his appetite was aroused, the bowels were again thoroughly cleared out with oil. He was put upon a diet consisting of beef-tea, milk-punch, oysters, etc., and upon the tincture of the chloride of iron, alternated with Huxham's tincture of bark. On the twenty-fifth day there was a slight change for the better, but his pulse continued 100°, as it had been for the previous fortnight. His tongue cleared off, and after the lapse of two more days the tetanic symptoms gradually subsided. The beef-tea and iron were continued, and on the thirty-seventh day after the receipt of the first injury the patient's strength was thought sufficient to enable him to undergo the operation, which his second accident had rendered inevitable.

Amputation of the leg was performed on the 29th of October. The method adopted was that of Lenoir, a modification of the circular operation, and left a serviceable stump at the middle third of the limb. The boy is now (December) in the enjoyment of perfect health, and is able to go to school, having already learned to use his crutches with safety.

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY OF PENNSYLVANIA.

CLINIC OF PROF. AGNEW, SEPTEMBER 27, 1871.

Reported by Dr. Elliott Richardson.

COLLES' FRACTURE OF RADIUS.

ON Sept. 27, 1871, a woman, 50 years of age, was brought to the clinic, who had fractured her left radius the previous Saturday week. The case had been judiciously treated, and but little deformity was therefore evident; but upon grasping the radius both above and below the point of suspected fracture, abnormal mobility and crepitus were distinctly perceived. Prof. Agnew then described the three different forms of fracture which occur at the lower end of the radius, viz.: Barton's, Smith's, and Colles'.

Barton's fracture must necessarily extend into the carpal articulating surface of the radius, and may consist in the detachment either of the posterior edge of this surface, or of a triangular fragment of bone, including the styloid process. Smith's fracture occurs at a point from 2 inches to 2½ inches from the articulating surface of the radius, and Colles', which is probably the most frequent of the three forms, is intermediate between the others. It is usually oblique, and produces a marked deformity. In consequence of the muscular attachments to the hand, wrist, and forearm, the upper fragment of the radius is drawn forward, while the wrist with the lower fragment is drawn backward and upward. In consequence, also, of the loss of the support of the radius to the wrist, the hand is strongly flexed to the radial side, and the wrist drawn from the ulna, the styloid process of which becomes very prominent; a deformity which it is exceedingly difficult to reduce. The deformities produced by the three forms of fracture at the lower end of the radius resemble one another closely. The treatment is the same in all, and consists in binding the arm upon a Bond's or a pistol-shaped splint so turned as to abduct the hand from the radial side when fitted upon it. The palm of the hand rests upon a wooden pad, so as to admit of motion of the fingers without disturbing the dressing.

In applying this splint, two wedge-shaped pads must be used,—one with the base upward, to be placed upon the dorsal surface over the projecting lower fragment, and the other with the base downward, upon the anterior surface of the arm over the extremity of the upper fragment. By means of these pads we are in most cases able to correct the antero-posterior deformity, and by the flexion of the hand and carpus to the ulnar side through the aid of the splint we endeavor to overcome the lateral displacement and prevent the projection of the lower end of the ulna.

In treating a recent fracture, the dressing should, at first, not be very tightly applied, and the case should be seen frequently by the surgeon, in order that, should much swelling occur, the bandages may be loosened. Usually the dressings have to be removed and reapplied once in twenty-four hours for the first day or two, or until all disposition to swell has ceased, after which they should be disturbed as little as possible.

On the twelfth or fourteenth day, daily passive movements of the joints of the injured limb may be commenced, and at the end of four weeks, in ordinary cases of Colles' fracture, the splint may be dispensed with. In spite of the utmost care in the treatment of this fracture, there is always more or less stiffening of the wrist and finger-joints resulting, due to

some extent to the adhesions which always form in joints kept at perfect rest for a long time, but principally to the involvement of the tendons which pass over the seat of fracture in the inflammatory changes resulting in the production of union of the divided bone.

This must be treated by the frequent application of some stimulating liniment, or by bathing the part twice a day in warm water and soap, and by passive motion of the joints. Under this treatment the usefulness of the member will gradually return.

FRACTURE OF CLAVICLE.

On the same day a little boy, 3 years of age, was brought before the class for examination and treatment. Nine days previously he had fallen upon the floor, sustaining serious injury of one shoulder. The nature of this injury became very evident as soon as the shoulders were exposed. An abnormal prominence, situated in the outer third of the clavicle of the injured side, was seen, and the shoulder of that side was lower than the other. A fracture of the clavicle had been sustained, and the prominence seen was due principally to the sheath of callus around the seat of fracture. Prof. Agnew said the deformity produced by fracture of the clavicle is not so great when the fracture occurs in the outer third as when it takes place at a point nearer the sternum, nor is it in any case so great in young children as in adults.

The characteristic deformity consists in the shoulder dropping downward, forward, and inward. When the fracture is complete, and is not situated within the limits of the coraco-clavicular ligament, the displacement of the fragments is always great. The inner fragment remains stationary, or nearly so, but the outer fragment is depressed and drawn inward towards the sternum, so that the distance between this bone and the acromion process becomes much shortened.

The indications for treatment are, therefore, to use means to draw the shoulder and with it the outer fragment upward, outward, and backward. In no other way are these indications so completely fulfilled as by placing the patient upon his back with his head and shoulders upon a level with the rest of his body; but this position soon becomes so irksome that it is often impossible to keep the patient sufficiently quiet. The three bandages of Desault, the pad and sling known as Fox's apparatus, and modifications of these, are therefore usually preferred. In children, however, the difficulties of retaining any of these forms of apparatus are so great that adhesive strips can be used to greater advantage. In the present case these were used with a pad in the axilla.

In about three weeks, the lecturer said, it would be safe to remove the dressing.

STRANGULATED INGUINAL HERNIA.

The next case was that of a man, aged 70 years, who had had an indirect inguinal hernia of the left side for the past three or four years. During this time it came down frequently, but was easily returned. The previous night, however, he could not reduce it, and pain at the seat of hernia and in the umbilicus supervened upon attempts to do so, and was soon followed by tympanites. The characters of the tumor were such as to leave no doubt of its nature, and the symptoms above detailed, even without the existence of vomiting, so commonly associated with strangulated hernia, were of a nature to prove the existence of strangulation. The lecturer said he would first apply taxis without etherizing the patient, and if unsuccessful would then produce anæsthesia. If this failed, opium suppositories, leeches to the groin, and cold application to the tumor would be resorted to.

The patient was placed in the recumbent position, with his knees and shoulders elevated. The tumor was seized and drawn downward below the external abdominal ring, and, being compressed, was pushed into the abdominal opening. The thumb and fingers of one hand were then applied on either side of the tumor, so as to retain the hernial contents in the canal and prevent it from being pushed between the layers composing the abdominal walls. By this method the hernia was easily reduced without ether. The patient was directed to wear a truss constantly when on his feet.

PENNSYLVANIA HOSPITAL.

CASE OF ACUTE ABSCESS OF THE LIVER.

SERVICE OF JAMES H. HUTCHINSON, M.D.

Reported by GEORGE S. GERHARD, M.D., Resident Physician.

MATILDA I., colored, æt. 23, single, was admitted December 6, 1871.

Her previous health had been good. With the exception of an attack of typhoid fever four years ago, which confined her to her bed for four weeks, she had never been laid up by sickness until the present time. She had never had malarial fever.

She stated that she had not been feeling well for three weeks previous to her admission to the hospital, but that she had not considered herself ill enough to stop her work, which was that of a domestic, until the evening preceding her admission. Three days before her entrance into the hospital, while sitting quietly in the house, she was suddenly attacked by a stabbing pain in the lower part of the right chest. This pain, she stated, had persisted, at times getting better and then worse again, until the day after her admission to the hospital. She had had no cough.

On admission, the patient was suffering intensely from pain in the lower part of her right chest, and was breathing very hurriedly; when she exerted herself, as in walking, the respirations became almost panting. Her skin was hot and dry. Her eye was perfectly clear. The pulse was frequent and feeble. The tongue was heavily coated with a white velvety fur. The bowels were confined. There was no abdominal tenderness. Physical examination of the chest revealed some relative dulness over the lower lobe of the right lung posteriorly, with broncho-vesicular respiration and a suspicion of pleuritic friction. A Dover's powder and counter-irritation to the right side of the chest were prescribed.

On the 7th, the patient passed a tolerably comfortable night. She has vomited once or twice this morning, but does not complain of pain. The skin is still hot, and the pulse is frequent. She was ordered a tablespoonful of neutral mixture, with a soothing dose of morphia, every third hour. The urine has been examined, but was not found to contain anything abnormal.

On the 8th, the general symptoms are unaltered. The bowels were very freely moved after a mild saline. The tongue remains heavily coated, but retains its moisture. She has complete anorexia.

A.M., temp., 102½°; pulse, 100. P.M., temp., 101°; pulse, 112.

On the 9th, the patient complains of pain in the lower part of the right chest, especially when she takes a full breath. There are now positive dulness on percussion over the lower part of the right chest posteriorly, and a well-marked pleuritic friction-sound. The respiration is still broncho-vesicular in this region. She was ordered to be wet-cupped to four ounces, and to have a poultice applied.

A.M., temp., 102½°; pulse, 100. P.M., temp., 102°; pulse, 112.

10th.—She is free from pain to-day. The condition of the tongue remains unchanged. The bowels are quiet.

11th.—The patient is again complaining of pain in the lower part of the right chest. She is breathing hurriedly. There are no new physical signs. A blister to the chest and Dover's powder in five-grain doses every fourth hour were ordered.

A.M., temp., 103½°; pulse, 116. P.M., temp., 99°; pulse, 116.

12th.—A.M., temp., 101°; pulse, 100. P.M., temp., 102°; pulse, 112.

13th.—A.M., temp., 103°; pulse, 112. P.M., temp., 104°; pulse, 116.

14th.—The dulness on percussion in the region before indicated is to-day more marked; the friction-sound is distinct.

A.M., temp., 102°; pulse, 116. P.M., temp., 104°; pulse, 104.

15th.—A.M., temp., 101°; pulse, 100. P.M., temp., 102½°; pulse, 112.

16th.—The bowels were frequently disturbed last night.

The tongue is moist, and as heavily coated as before. The abdomen is meteoric, but not tender.

A.M., temp., 102°; pulse, 100; resp., 36. P.M., temp., 102°; pulse, 120; resp., 36.

17th.—The bowels were moved several times last night. A mineral acid and quinine mixture was prescribed.

A.M., temp., 101°; pulse, 120; resp., 44. P.M., temp., 101°; pulse, 128; resp., 52.

18th.—The diarrhœa continues. The dejecta are liquid, and contain greenish masses resembling cooked spinach. To-day there is marked dulness over the posterior part of the right chest from a point one inch below the spine of the scapula to the last rib. The pleuritic friction-sound still exists, with broncho-vesicular respiration. The vocal fremitus is feeble over this part of the chest. Anteriorly dulness extends from the third interspace on the right side to a point one inch below the costal border. The edge of the liver can be felt projecting below the border of the last rib.

A.M., temp., 102°; pulse, 120; resp., 36. P.M., temp., 102½°; pulse, 128; resp., 36.

19th.—The patient still has diarrhœa. She is weak, and is evidently sinking. The respirations are very frequent. The pulse is frequent and exceedingly feeble.

A.M., temp., 102°; pulse, 132; resp., 52.

Death occurred at 3 P.M., after a well-marked convulsion.

The autopsy was made five hours after death. The rigor mortis was feebly pronounced. The heart was found healthy. The lower half of the right lung was adherent by many recent and easily-torn bands to the costal pleura, and somewhat congested. There was no fluid in the pleural cavity. The left lung was perfectly healthy.

The right lobe of the liver was considerably enlarged and adherent to the under surface of the diaphragm. This part of the liver was the seat of an abscess, the cavity of which contained a large amount of creamy pus. The wall of the abscess was formed by softened hepatic tissue. The tissue of the left lobe was rather pale, but in other respects presented a normal appearance. The gall-bladder was distended, but did not contain any calculi.

The kidneys and spleen were healthy. The mucous membrane of the small intestine was injected in many places, but entirely free from ulceration. The patches of Peyer and the solitary glands presented a normal appearance. The large intestine was healthy.

This case of hepatic abscess is particularly interesting on account of the obscurity of the symptoms and the rapid course that it pursued.

The patient died on the thirteenth day after her admission to the hospital. She had been complaining for three weeks previously of an obscure feeling of malaise; but it is difficult to say whether this had any connection with her disease. Until the occurrence of the pain in the chest, three days prior to her admission, she had had no marked symptom, and certainly none of hepatic disease.

There was also an entire absence of the usual symptoms of hepatic disease while the patient was in the hospital, with the exception of marked enlargement of the liver.

Rigors and perspirations, and pain in the region of the liver, never occurred. The pain that the patient suffered was always referred to the posterior part of the right chest, and was accounted for by the pleurisy that existed.

EPISCOPAL HOSPITAL.

SERVICE OF DR. J. V. INGHAM.

CASE OF CANCER OF THE STOMACH, PRODUCING COMPLETE PYLORIC STENOSIS.

Reported by FRANCIS L. HAYNES, M.D.,

Resident Physician.

F. S. first visited the hospital dispensary, July 30, 1870. He was forty-nine years of age, married, a native of Germany, and by occupation a hostler. His father, he stated, died at the age of eighty-eight, from an unknown cause; his mother at sixty-two, from abdominal "dropsy." Excepting these somewhat undefined facts, he was ignorant of the medical history of his family.

The patient enjoyed good health until the year 1865. Since that date he has had uneasiness or pain in the region of the stomach after eating or drinking. For four months preceding his visit to the dispensary he vomited every evening what seemed to him all the food he had eaten during the day. Except in the evening, he has been entirely free from vomiting. During this period he has suffered from a constant sense of "fulness in the stomach," relieved but slightly by the vomiting; he has not had any actual pain. Since the vomiting commenced, his bowels have been very constipated. His strength has gradually failed.

At the time of his visit he continued to have all the symptoms described in the previous history.

He was treated at different times by means of purgatives, bismuth, ipecacuanha, blisters to the epigastrium, and various other remedies, but none of them produced any amelioration of the symptoms, except the blisters, which relieved the sense of fulness to a great degree. He became too weak to leave his room, and was then visited at his home. He was finally ordered to confine himself exclusively to a liquid diet (beef-tea and whiskey-punch) and to take one minim of hydrocyanic acid (U.S.P.) three times a day. The bowels were kept open by simple injections. The effect of these measures was to produce immediate relief, and for a time the patient improved to such an extent that he was able to take short walks every day.

On August 22 his condition was thus described: He is emaciated. The skin is wrinkled,—of a straw-yellow color. The naso-labial furrows are very deep; the conjunctiva pearly-white. The tongue is slightly furred. Complete anorexia exists, as has been the case since the vomiting set in. No vomiting since he has been put on a liquid diet.

Physical examination.—The epigastric region generally is obscurely dull on percussion, and on pressure over it the fingers meet with more than the natural resistance, though no tumor can be detected. No tenderness exists.

August 26.—The patient has vomited once since the last visit, the result of indulgence in solid food. On causing the abdominal walls to be relaxed, a bulging of the epigastric region can be detected. The dulness on percussion in that situation is more marked. On palpation, however, the fingers cannot detect a tumor.

September 1.—Since the last visit, the patient has vomited several times, and at all periods of the day, without apparent cause. The vomit, which previously consisted of altered food, presents now a black granular appearance, resembling that of coffee-grounds. On microscopical examination, no morphological element except shrivelled blood-corpuscles can be detected. He has passed similar material by the bowels.

September 18.—A distinct, hard, uneven ridge can be felt passing across the central portion of the epigastric region.

The vomiting of altered blood continued, unchecked by remedies: it was not copious, but occurred once or twice daily. The patient gradually sank, refusing to take nourishment for forty-eight hours before his death, which occurred on October 6, 1870.

Autopsy, twenty-four hours after death.—The abdominal organs only were examined. The lesser curvature of the stomach, its posterior wall, and its pyloric extremity were transformed into a dense mass of scirrhus. The pyloric orifice was completely closed by the encroachment of the disease. On holding the stomach so as to form a bag, and pouring water into it, not a drop passed through the pylorus. The internal surface of the mass near the pylorus was deeply ulcerated. Surrounding this ulceration for some distance the surface was softened, as if ready to melt away. The stomach contained a quantity of material similar to that which was vomited during life. The liver was about two-thirds its normal size. The pancreas was small. The intestines were greatly diminished in calibre. The diameter of the colon was not greater than that of the normal jejunum.

No traces of cancer were discovered in any other of the abdominal organs.

On microscopic examination of the tumor, its minute structure was found to be that of ordinary hard cancer.

ABSTRACTS.

BY ROBERT STONE, M.D.,

Irvington, N.Y.

THE MODE OF TRANSMISSION OF CHOLERA IN INDIA.—Pettenkofer collects (*Centralblatt Med. Wiss.*, lxxi. 34) the successively published etiological investigations on cholera in India. Judged according to numbers, the Indian physicians are principally contagionists, although in different degrees according to the kind of contagion. Of four hundred and eighty-one, thirty-three, for example, assert the portability from person to person, while only five deny the contagiousness of cholera altogether and the inoculation through the intestinal dejections. At the head of the majority in this respect stands Macnamara, in an extensive work on the different modes of infection. He considers the contact with those affected, their excrements and clothes, as a frequent cause of the disease, and narrates several apparently very striking examples of infection from the drinking-water. He especially uses, however, for his views on the transmission of cholera, the return of the great pilgrim festival at Hurdwar which preceded the outbreak of the disease in 1867. Three million of people went forth from a camping-ground of about one square mile, where already several cases of cholera had occurred, and spread over all India. The advocates of contagiousness strive to prove that at that time this impregnated stream of mankind covered the land with cholera as they radiated from that centre. This view Bryden most decisively opposes, and combats by the most extended and most critical investigations the views of the miasmatists. He shows, in the first place, by his charts of the epidemic of 1867, that its boundaries, and even the direction which the disease took, by no means corresponded with the paths of the pilgrims,—that, among others, Central India remained at that time free from cholera. For this and for the previous epidemics Bryden had access to a very large and complete mass of material,—the inhabitants of 78 garrisons with over 130,000 men, and the 40,000 to 50,000 inmates of 128 prisons. From the careful investigation of these cases Bryden attempts to disprove the views of the advocates of the contagion theory, and to prove that the quarantine which has been so long and so strenuously enforced in India is useless, and especially to substantiate the theory of local infection, incubation, and the need of a change of locality. He employs for this purpose partly cases of ships, and, in part, gives some striking facts from the marchings of Indian regiments.

Bryden's investigations culminate in this, that the vicinity of the mouths of the Ganges and Brahmaputra from the earliest times presented an endemic region of cholera. Besides this naturally somewhat varying boundary, the disease occurs epidemically in various parts, which may be grouped together by their essential meteorological characters. The *primum agens* for the production of cholera in the epidemic cholera provinces are rain-winds and monsoons, which, on the one hand, influence the moisture of the ground, and, on the other, are direct carriers of the disease, and precede it step by step in its wanderings. Besides this, the cholera has its especial times of the year: for the endemic region, the hot dry season (April); for the majority of the epidemic regions, the months of February, March, and April. In Calcutta, this spring cholera occurs typically; in the Punjab, monsoon cholera. Madras has a double cholera period in the year.

Pettenkofer combines the investigations of the spread of cholera in India and in Europe under seven heads. In these he gives all credit to Bryden's work, and partly also to his monsoon theory, and subscribes to his proofs against the absolute contagionists. He nevertheless admits how strongly the experiences outside of India militate against the views of those miasmatics "who regard the influence of the human intercourse as unessential, and believe the cholera to be disseminated by the winds or autochthonously." In his opinion the influence of human intercourse in the production of cholera stands next in importance to the state of moisture of the ground; the number of those attacked will be essentially modified by individual predisposition. (This latter was in this case much greater among Europeans than among the inhabitants of India.) On the other hand, the very observations made in India are calculated to show the insufficiency of the theory of those who would explain the local and temporary occurrence of cholera as the result of the drinking of contaminated water.

SOME OF THE GENERAL PHENOMENA CONSEQUENT UPON EXTENSIVE BURNS OF THE SURFACE.—Falk, in a communication on this subject (*Virchow's Arch.*, 1871, liii., 42 Stn)., says that in rabbits or dogs in whom the skin has been burned during narcosis produced by subcutaneous injection of morphine with the subsequent use of chloroform, the temperature sinks in the rectum at first rapidly, then more slowly, but continuously up to death. "Respiration ceases first at 19° C., or even at a lower temperature; the heart pulsates a short time longer." From the similar condition of animals whose skin has been varnished, a cessation of the transpiration of the skin consequent upon burning has been assumed. Such is not the fact, according to Falk; for while frogs deprived of their lungs, and the greater part of whose surface has been covered with a layer of india-rubber, very soon die, those animals in whom a similar extent of the surface has been merely burned, live much longer; in the same way, in rabbits, the activity of the perspiration of the skin is retained after scalding, if care be taken to prevent excoriations. Sulphuretted hydrogen acted fatally through their skin, entirely as in animals in a normal state. Neither can retention of the products of exhalation (ammonia and the fleeting fatty acids) be assumed, since these substances introduced into the blood produce partly a different order of phenomena, or only do so at entirely disproportionate doses. Besides, the secretive powers of scalded portions of the skin are not destroyed; for Falk was able after injection of iodine to demonstrate the presence of traces of the iodine in a distant burn-vesicle. Furthermore, Dr. Falk comes to the conclusion, after his experiments under the guidance of Rosenthal, that the cause of the depression of temperature with the increased loss of heat is to be sought in the skin. In animals burned on one side only, the temperature is indeed higher on that side than on the uninjured side, but the decrease of temperature shows itself in an equal space of time unmistakably greater on the injured than on the sound side. A certain quantity of water was raised to a higher temperature by a scalded rabbit under the influence of chloroform, than by the animal under chloroform only, other circumstances being equal. The increased transmission of warmth is the consequence of the dilatation of the vessels attacked by the heat. This dilatation Falk regards as independent of nerve-influence, because the dilatation and the increased transmission can also be produced in scalding of extremities whose large nerve-trunks have been divided. An action of the ganglionic apparatus in the walls of the vessels he regards as improbable, and equally so the influence of the heat-rigidity, which at the most, perhaps, has some action on the larger vessels. The principal cause of the dilatation Falk rather looks for in the lessening of the elasticity of the vessels and the adjacent tissue caused by the high temperature. (It is well known that dilatation and the other phenomena of inflammation occur after section of the nerve-trunks and from other sources of irritation besides heat.)

The increased loss of temperature is, however, not alone the cause of death from burns; death can be postponed but not avoided by a checking of the loss of heat, similarly as, according to Valentin, when varnish is applied it can be thus put off but not evaded. Artificial respiration also, in connection with the application of heat, which Walther found useful in frozen frogs (*Centralblatt*, 1866–7), has not the same result after burns. The dilatation of the vessels and the depression of the blood-pressure result in a weakening of the heart, and this, in connection with the loss of temperature, is the cause of death. As to treatment, therefore, exciting measures, and such means as wrapping in cotton wadding, and warm baths, in order to act against the cooling of the body or to counteract the dilatation of the vessels from which it results, are to be recommended. In the latter respect, Falk, from some not entirely decisive experiments, advises the experimental employment of ergotin.

The inflammations of internal organs frequently found in the bodies of persons burned, especially of the lungs and kidneys, but also of the serous membranes, Falk attributes to

the alteration of the blood produced by the burning, of which especially the destruction of the blood-corpuscles is a known result: the deeper the burn, the more extensively are the blood-corpuscles destroyed, and therefore in just such cases the inflammations in question are met with. Such cases present many analogies to those of poisoning by carbonic oxide, and, as in the latter cases, so in the former, transfusion is to be tried. The ulcerations of the stomach and of the duodenum, not unfrequently met with after burning, are to be attributed simply to the local stoppage of the circulation caused by the paralysis of the heart's action.

Microscopic Examination of the Fresh Dejecta of Cholera Patients.—In the year 1866 (*St. Petersburg Medical Journal*, 1871), Klob and Jome, and soon after Hallier, found in the dejecta of cholera patients a number of microscopic fungi, and thought that they had discovered therein the cause of that disease. But these investigations were entirely confined to excrement which had stood for several hours; and, as various parasitic animals entirely foreign to the intestines might have mingled with it, or have developed or increased through the influence of the light and air, Dr. Loesch regarded it worth while to make a renewed examination of cholera dejecta, for which the recent epidemic of cholera in St. Petersburg gave him ample material. For his first examination the author made use of the dejecta of a patient admitted to the clinic in the asphyxia period of fully-developed cholera: vomiting, with diarrhœa, pains in the bowels, cramps in the upper and lower intestines, pulse hardly perceptible, face, hands, and feet cold to the touch and bluish. The dejections were fluid, of a dirty-white color, almost entirely odorless. On standing there formed in them two layers, an upper, entirely fluid, troubled, like milk with a large proportion of water; and a lower, composed of whitish, semi-transparent flocculi and finely granular masses.

The microscopic examination occurred at the latest from two to three minutes after the evacuation, and resulted as follows:

1st. A large number of oval and short corpuscles of from 0.006 to 0.008 mm., on the rapid and irregular agitation of which were plainly visible corpuscles with threadlike continuations, excretions, or tails, which exceeded by three or four times the length of the body corpuscle, and which kept up a continuous motion, in which an end was recognizable, while the opposite side of the corpuscles appeared slightly elongated and rounded off. This end, however, was not recognized with certainty, as the corpuscles, composed of a somewhat transparent protoplasm, possessed no sharply-defined contours, and from the constant movement took on now a round, now an oval, or even an elongated shape. In the majority of these bodies Loesch observed a moderately large, round, sharply-defined nucleus; no enveloping membrane or aperture was perceptible. These corpuscles were on further investigation decided to be Cercomomas intestinalis, or monads of a similar form. Their number was very large; at a magnifying power of 600 diameters from fifteen to twenty were counted within the field. In a small drop, of the size of a pin's head, several hundred could be perceived, so that their number, in view of the consequent examinations, might be estimated by the million. The same dejecta were again examined two hours later. No motion was perceptible in any of the numerous previously observed monads, and the monads themselves were not distinguishable as such; the tails had entirely disappeared; the corpuscles themselves appeared shapeless or three-cornered and cylindrical: only the nucleus was still perceptible; that appeared enlarged and like a cell undergoing fatty transformation. With a very strong magnifying power they were recognized as encysted monads.

2d. The minutest of the varieties of monads, although in far smaller numbers than the above-named: Monas crepusculum, etc., various vibriones, principally Vibriona lineola and Vibriona nudula.

3d. A large number of vegetable parasites in the most varied stages of development. Micrococcus, partly in the form of barely perceptible corpuscles, wandering to and fro, and some motionless, partly in the form of corpuscles with defined contours and bright contents. The latter were either disseminated singly or in groups (the colonies of Hallier). Further, wreath-like Mycothricis of various lengths, composed of three and four and also of forty and fifty joints. The single joints were round, oval, and also cylindrical with rounded ends. Cryptococcus and oidium were rare. More numerously occurred also large round cells (0.01 to 0.014 mm.), which presented a double sharply-defined contour, with contents of a whitish-yellow color, and at the period of separation presented an hour-glass shape with a longer or shorter investment.

Remains of food, fat, and detritus were seen in small quantities only, while cylindrical epithelium, pus, mucus, or blood-corpuscles were nowhere to be found. In order now to decide further to which order of fungi the micrococcus, mycothrix, etc. found in the dejecta belong, Dr. Loesch undertook, after the manner of Hallier, three cultivations, and sowed for this purpose minute portions of excrement mingled with thick starch-paste and a little tartrate of ammonia. These formed Penicillium crustaceum and Mucor mucedo, together with fungi which are most common in nature, and which form by cultivation in normal excrement, and which also germinate in starch-paste when the latter is left to itself.

Subsequent examinations, which Loesch repeatedly undertook, produced precisely the same results. That Hallier, Klob, and Jome failed to find in the dejecta examined by them the earlier-described parasites which had been observed already in the cholera epidemic of 1863 and 1864, Dr. Loesch ascribes to the fact that those dejecta were no longer fresh, *i.e.* were not in the same condition, and that the monads had already expired or had become encysted, and were, therefore, from their changed form no longer recognizable. What rôle these animal and vegetable parasites play in the process of cholera it is difficult at present to determine. The large numbers of the parasites here discovered would indeed lead to the presumption that they have a powerfully irritating effect upon the mucous membrane, and produce an exceedingly rapid change in the intestinal canal, and thus may bring about the entire cholera process. It deserves, however, to be remembered here that these parasites are to be met with also in the dejecta of healthy persons or of those suffering with ordinary catarrhs, and hence, perhaps, are only an accidental and not an essential condition of cholera dejecta, and only develop in large quantities because the conditions for their multiplication are extremely favorable during that disease. To the solution of this question Loesch proposes to devote further experiments.

The Comparative Influence of Marriage and Celibacy.—M. Bertillon, in a note to the Académie de Médecine (*L'Union Médicale*, November 16, 1871), shows that husbands have a better chance of life than either celibatists or widowers, for he has found that between the ages of 25 and 30 years one thousand husbands will furnish about six deaths annually, while the same number of single men and widowers will furnish respectively ten and twenty-two. Between the ages of 30 and 35 years the proportions are seven per one thousand for husbands, eleven and a half for single men, and nineteen for widowers. Between 35 and 40 the proportions are respectively seven, thirteen, and seventeen. It is necessary, M. Bertillon thinks, to attribute these results to marriage; and to the objection sometimes made, that those who marry are generally in good health and in easy circumstances, he answers by referring to the large mortality among widowers. Marriage at a very early age, nevertheless, gives rise to a large proportion of deaths among husbands. The mortality between the ages of 18 and 35 years among married women is less than among single women, but the difference is less than in the case of men, because women are at this time exposed to all the dangers of parturition; but, by a sort of compensation, the mortality among widows is less than among widowers or single women of the same age. He finds from a calculation of probabilities that people who marry between the ages of 20 and 25 years have about forty years of life before them, while those who remain single have about thirty-five years to live. Criminals are more frequently single than married men, and there is a greater tendency to suicide and to mental alienation among the former than among the latter.

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EDITORIAL.

THE ANNUAL REPORT OF THE SURGEON-GENERAL U. S. ARMY.

THE report of Gen. Barnes to the Secretary of War contains, as usual, much valuable information, not merely of a professional, but also of a general character. From it we learn that the entire expense of the Medical Department for the year ending June 30, 1871, was $297,477.08.

The average mean strength of the army during the fiscal year was 29,365 *white* and 2608 *colored* troops. Among the white troops, the total number of cases of all kinds reported as taken on the sick-list was 63,507, being at the rate of 2163 per 1000 of mean strength. Of the whole number taken on sick report, 54,710 were for disease alone, and 8797 for wounds, accidents, and injuries of all kinds. The average number constantly on sick report during the year was 1480; of these, 1190 were under treatment for disease, and 290 for wounds, accidents, and injuries. The total mortality-rate is greater than that for the previous year, the chief increase occurring in the proportion of deaths from disease. The proportion of deaths from all causes to cases treated was 1 to 122. The total number of deaths reported was 519, or 17 per 1000 of mean strength. Of these, 363 died of disease, and 156 of wounds, accidents, and injuries. 1091 white soldiers are reported to have been discharged on "surgeon's certificate of disability," being at the rate of 37 per 1000 of mean strength.

The reports for the *colored* troops give the following figures, which do not include the white officers. The total number of cases of all kinds reported was 3551, or 1362 per 1000 of mean strength. Of these, 2964 were cases of disease, and 587 were wounds, accidents, and injuries. The average number constantly on sick report was 104, or 40 per 1000 of mean strength, of whom 74 were under treatment for disease, and 30 for wounds, accidents, and injuries. The number of deaths from all causes reported was 49, or 19 per 1000 of mean strength. Of these, 28 died of disease, and 21 of wounds, accidents, and injuries. The proportion of deaths from all causes to cases treated was 1 to 72. The number of discharged on "surgeon's certificate of disability" was 71, being at the rate of 27 per 1000 of mean strength.

There were entered on the registers the histories of 5210 surgical cases of the late war, making a total of 235,398 now recorded; also additional information respecting 9661 cases already recorded; and abstracts of 8947 cases which were not placed in the permanent registers were prepared for revision.

The Army Medical Museum continues to increase in the number and variety of specimens and its consequent usefulness. The number of specimens added during the year was 1516,—a present total of 15,018. The number of visitors during the year was over 15,000.

Part I. of the Medical and Surgical History of the War is near completion, and will be laid before Congress during the present session, when it is hoped a sufficient appropriation will be made to continue the publication of the remaining parts. Circular No. 4, a report upon barracks and hospitals, compiled by Assistant-Surgeon J. S. Billings, U.S.A., Circular No. 3, 1870, approved plans and specifications for post-hospitals,—also a revised edition of the same (Circular No. 2, 1871),—have been published during the year; and the Standard Supply Table of the Medical Department of the Army (Circular No. 1, 1871) has been carefully revised and published, with a view to more rigid responsibility and greater efficiency.

During the past year one surgeon and one assistant-surgeon have died, one assistant-surgeon has been retired, and one assistant-surgeon cashiered. There are at present fifty-four vacancies in the corps,—viz.: chief medical purveyor, one assistant medical purveyor, three surgeons, and forty-nine assistant surgeons. In concluding his report, Gen. Barnes says, "If the restrictions as to promotions and appointments in the medical corps were removed at once, it would require several years through the prescribed modes of annual examination to restore it to the standard number allowed by existing laws; and the reduction of that number by stoppage of promotion and appointments has proved to be prejudicial to the interests of the service, both in a sanitary and economical view."

WE regret to have to announce the retirement of Dr. Tyson from the position of Assistant Editor of this journal,—a step which he has thought necessary in consequence of the demands made upon his time by professional engagements. He will continue from time to time to furnish contributions to our pages.

LEADING ARTICLES.

WHITHER ARE WE DRIFTING?

SOME little time since, chance or an evil star of destiny led us into the rooms of the Pennsylvania Society for Prevention of Cruelty to Animals, and we found ourselves confronted by a crowd of ladies, eagerly desiring each to have her speak on the horrid cruelty of vivisections.

"Dr. —— says there never was anything learned from

vivisections," said one. "Yes, and if anything ever was learned, Brown-Séquard says all is now known that is worth knowing," echoed a second. "Magendie on his death-bed regretted it bitterly, and confessed it to be the sin which had ruined his soul," chimed in a third. "How can you do it?" And mild eyes looked so reproachfully that we really did begin to think ourselves a sort of a monster, and certainly appreciated most fully the feelings of their possessor.

It may seem strange, when the poor are dying in our streets for very cold and poverty, when the sick are languishing in half-furnished hospitals or perishing in the by-ways and alleys, calling down God's curse upon the city that leaves them so, when the pestilence is deepening the gloom in many a stricken household, when in almshouse and alley the patient sufferers are longing for human sympathy and some one to break to them the bread of life,—when these things are so, it may seem strange that women of refinement and culture, clad in their fine raiment and rejoicing in their happy homes, should pass by their own suffering fellow-beings and devote themselves with all their earnestness to brutes, weighing the life and suffering of man against the life and suffering of the brute, and casting in their strength and powers with the latter. But when a woman has once become a professional protector of the dog,—with her whole-heartedness, her mine of tender feeling, her inborn tendency to see only one side of a question,—it is but natural that she should get most narrow and distorted views, ending in that bigoted ignorance which hesitates not—knowing no better—to advance with a ludicrous persistence the most transparent falsities as proven facts.

Such things any one may feel disposed to pardon in an elegant lady; but what shall we say when a member of our profession, driven by some nightmare chimera of his imagination, oppressed by a morbid sensibility, puts on record such sentiments as are contained in Dr. H. J. Bigelow's pamphlet on Medical Education in America? As these paragraphs have been in all our daily papers, and as space is precious, it is unnecessary here to quote them. We know it will be said it is of very little importance what a man who writes such sentences thinks; and so we acknowledge it to be. Yet office throws a halo around the most contemptible. In America, public opinion must finally uphold or crush out everything brought to its bar. To-day the practice of vivisection is at the bar of public opinion; and far and wide over our land, to the sad detriment of truth, the dictum of a professor in Harvard College is being quoted by hundreds who never before heard of the Boston surgeon. The false poisoned arrow which he has shot has far outstripped all the truth a lifetime has sped on its way.

Much that our professor writes is so childish as to be beneath criticism. Witness the proposition that when a vivisector is experimenting he should always cut one-eighth the distance into his own flesh that he does into that of his victim. It is possible that the professor, when he wrote this, thought it fine, ingenious, and no doubt the F. B. of the Pennsylvania Society for Prevention of Cruelty to Animals thinks it so; but, we say, whither are we drifting, when a leader of the profession can stand up and speak such nonsense before one of its chief societies?

But we have a graver charge than that of nonsense to make against this writing; much of it is false,—and, coming from one so high, it must be *knowingly* false. It is a direct attempt to hide the truth: on the one hand he draws a picture of brute suffering wrought up to a pitch far above what it is in nature, heightened with sketches drawn from the veterinary school of Alfort, and on the other he makes the blank assertion that no good has of late years come out of vivisection. Must we not repeat *knowingly* false? for is it possible that the professor does not know that Alfort was a veterinary school, and that it was chiefly, or at least largely, through the efforts of the medical profession—the vivisectors—that it was broken up? We say *knowingly* false; for is it possible that a Harvard professor has not heard of vaso-motor nerves, of spinal cord, or of modern nervous physiology, which rests almost exclusively on vivisection? We say *knowingly* false; for is it conceivable that he should lecture on tetanus and not have heard of Calabar bean or chloral, whose action and powers were first learned by means of vivisection? Once more we say *knowingly* false; for is it possible that to his ears not yet have come sounds of the great truths about inflammation and tuberculosis and other general nutritive disturbances which are being wrought out through vivisection?

It is needless for us to say more on these paragraphs of Dr. Bigelow; their own condemnation is stamped so deep and sharp in their very fibre that every professional man will at once perceive it; but to let them go unchallenged, to let the public think that they are true, or represent the opinions of a large body of the American profession, were an outrage to that profession, and especially to the few who, without hope of direct reward, spend hours of toil in search, by the repulsive method of vivisection, for precious truth and human boon.

If such words have astonished and stirred us, much more deeply and indignantly have we been moved for the honor and fair name of our American profession by other paragraphs in this most remarkable pamphlet.

The Roman philosopher, when sore sickness, dull business, or a scolding wife made life seem weariness, threw off the load, and the world praised his courage. But times have changed, and murder and suicide have been rendered unfashionable by Christianity. Napoleon, in Egypt, shot down his Arab prisoners by thousands, justifying himself by a stern necessity; but the world execrated him.

Some time since, a leading practitioner of this city—a plain Quaker gentleman, marked by his peculiar garb—was horrified by being asked whether it was true that when a baby was suffering, and he thought that it would not recover, he put it to death. If the mere suspicion sent a shudder through him, what must be his astonish-

ment when a learned professor states that such or very similar action was his habitual practice? We will not put Dr. Bigelow in a false light, and therefore quote the passage in full from page 35 of his pamphlet:

"In a surgical practice of twenty-five years, I have never intentionally given a patient, unless by his own choice, any unnarcotized pain, *nor have I allowed a patient to die a death of pain, when opium would lull him into his long sleep. I share the responsibility of this with the surgeon who walked about the battle-field distributing morphia to the hopelessly wounded, and with the soldier of Ambroise Paré, who did more.* It has been my lot to see a friend, at the end of a painful and hopeless malady, to whom, when the hour of death seemed to be near at hand, I had given the morphine largely, twice awaken with a week's new life, due to eighteen or twenty-four hours' deep sleep and continued exemption from pain."

If English mean anything, these sentences certainly mean that when, in his finite judgment, death is at hand, Dr. Bigelow, driven by the same morbid sensibility that has so warped and distorted his vision in regard to vivisection, hesitates not to take into his feeble hand the issues of life and death, which are said to belong to the Almighty. The inference from the last sentence, taken with what goes before, is inevitable,—that his friend did not wake up from the third poisonous draught.

In Philadelphia we have not as yet progressed so far as to lose respect for a certain book which says, most emphatically, Thou shalt commit no murder. And we had thought that even in self-complacent Boston, the centre of progress, this old-fashioned maxim still held sway in the profession. But with sorrow and shamefacedness we hang our heads; nay, rather, with determined earnestness let us raise our voices in indignant protest at this last and vilest prostitution of our sacred calling. Time was when physicians were earnest men, full of sympathy and true zeal for the welfare of their kind; but, alas! we seem to be drifting away from the ancient moorings; the profession is fast becoming a trade; but infinitely more welcome were the simple commercial basis than this maudlin sensibility which would utterly pervert the truth and hesitate not to trifle with human life.

CORRESPONDENCE.

To the Editor of the Philadelphia Medical Times.

SIR,—Dr. Stephen Smith, in replying (on p. 94 of your issue of December 1) to criticisms by Dr. Ashhurst (*American Journal of the Medical Sciences*, October, 1871, p. 451) on an article "On Amputations at the Ankle-Joint in Military Surgery" (Surgical Memoirs of the War of the Rebellion, edited by Prof. Frank Hastings Hamilton, A.B., A.M., M.D., etc.), is pleased to digress from ankle-joint operations to those at the hip, and to accuse me of "vitiating" the conclusions derivable from the statistics of that operation, in admitting the case of S. Cooper and rejecting that ascribed to Drs. Richards and Claggett. The relevancy of this criticism in a discussion on ankle-joint operations is obscure. Of its fairness, those who have consulted Circular No. 7, S.G.O., 1867, can judge. The tables therein were of cases of amputation for gunshot injury, and hence, if authenticated, the case ascribed to Drs. Claggett and Richards could not have a place in them. But Samuel Cooper, after describing the exarticulation at the hip for gunshot injury, in which he assisted Cole, in Holland, in 1814, proceeds to say (I cite from the quotation from the "Surgical Dictionary" in Dr. Smith's letter, congratulating myself on the opportunity of consulting the extended extract from that rare work), writing of a soldier with his femur shattered in the upper portion by grape, "*I ventured to perform the same operation.*" Surgical statisticians would hardly have acquitted me had I omitted this case from a table designed to show the mortality of amputations at the hip after gunshot wounds, although the unfortunate patient died under the operation and before its completion. Had the Cooper case been excluded, the difference in the death-rate would have been six-tenths of one per cent. I hope that Dr. Smith may never be farther out of the way in his statistical inquiries.

Very respectfully,

George A. Otis,
Assistant-Surgeon, U.S.A.

To the Editor of the Philadelphia Medical Times.

SIR,—I find in the last issue of the *Times* (vol. ii. No. 30), under the head of Miscellany, a table to show the "Singular Uniformity of the Mortality-Rate, illustrated by the Statistics of Cases of Smallpox in Philadelphia from 1860 to 1870 inclusive." The figures are said to have been taken from the records of the Board of Health, which is, no doubt, true so far as it goes; but when the means are known by which these figures were arrived at, the cause of the singular uniformity will be apparent enough.

Through the courtesy of Mr. Addicks, Health Officer, I have had placed in my hands a copy of his report to the Board of Health, containing the table alluded to; and I there find that in presenting these figures he says, the deaths from smallpox in Philadelphia during the period from 1860 to 1870 being known, the total number of cases unknown, he has simply estimated the number of cases that have occurred during this period, by taking as a basis the ratio of deaths to the known number of cases reported during the present year (1871) up to October 14, which amounts to about 1 to 6.6.

In this connection I might add that since the report referred to was made, the death-rate has undergone a material change, for up to December 23, 1871, the whole number of cases reported amounts to 6582, out of which there have been 1428 deaths, making 1 to 4.6. This, of course, includes all cases reported, vaccinated and unvaccinated.

Hoping you will give this communication room in your journal,

I remain, very respectfully,
W. M. Welch, M.D.

1230 Spring Garden Street, December 21, 1871.

Paralysis of Ocular Muscles treated with Calabar Bean.—Mr. T. Wharton Jones reports in the December number of *The Practitioner* two cases of paralysis of ocular muscles successfully treated by dropping a solution of the extract of Calabar bean into the eye.

REVIEWS AND BOOK NOTICES.

NEURALGIA AND THE DISEASES THAT RESEMBLE IT. By FRANCIS E. ANSTIE, M.D. (Lond.), F.R.C.P., Lecturer on Medicine in Westminster Hospital School. 8vo, pp. 296. London and New York, Macmillan & Co., 1871.

In the present work Dr. Anstie elaborates certain views on the subject of neuralgia, which he has already briefly given to the profession in an excellent article in Reynolds' System of Medicine, and which he has had reason to believe were imperfectly comprehended. He embraces the opportunity to vindicate for neuralgia that distinct and independent position which he is convinced it really holds, and to prove that it is not a mere offshoot of the gouty or rheumatic diathesis, still less a mere chance symptom of a score of different and incongruous diseases. The volume opens with a few remarks "On Pain in General." Pain, Dr. Anstie holds, involves a lowering of the ordinary sensory function, and is due to a perturbation of nerve-force, originating in dynamic disturbance either within or without the nervous system; the susceptibility to this perturbation being great in proportion to the physical imperfection of the nervous tissue, until this imperfection reaches to the extent of cutting off nervous communications (paralysis). There can be very little doubt that this is the true view of the pathological import of pain.

The most important chapter in the book is, however, that which treats of the etiology and pathology of neuralgia; and in the following notice we shall call our readers' attention principally to those views on these subjects which have struck us as original and ingenious. In the first place, Dr. Anstie removes neuralgia from the list of purely functional diseases, and, placing the seat of the morbid process in the posterior roots of the spinal nerves, or in the gray matter with which they are connected, he is inclined to believe that this consists in an atrophic change. This atrophy may be preceded by inflammation, but not necessarily, as it may be produced by long-continued alteration in the nutrition of the part caused by peripheral irritation of the nerves. The amount of positive evidence in favor of this view, it must be confessed, is very small; there exists, however, at least one observation which seems to confirm it. In a case reported by Romberg, a man had suffered for several years from the most violent and intractable epileptiform trigeminal neuralgia, complicated with interesting trophic changes of the tissues. Post-mortem examination showed that the pressure of an internal aneurism had almost entirely destroyed the Casserian ganglion of the painful nerve, that the trunk and posterior root of the nerve were in a state of advanced atrophic softening, and that the atrophic process had extended in a less degree to the nerve of the opposite side. Moreover, in locomotor ataxy, in which the main anatomical change is a progressive atrophy of the posterior columns, which usually falls with peculiar severity on the *posterior nerve-roots* or on the parts of the gray matter immediately adjoining them, *neuralgia* may be said to be a *constant and most characteristic phenomenon*. It has been experimentally demonstrated by Tresler, a pupil of Leyden's, that irritation may be conveyed to the spinal cord, and give rise there to inflammatory products, without the nerve which has served as the medium of communication taking part in the inflammatory process. The amount of negative evidence in favor of Dr. Anstie's view is, however, greater; for in the immense majority of instances in which the painful nerves have been examined at the apparent site of pain, nothing has been discovered to lead us to connect neuralgia definitely with any sort of change. It is true neuritis has been occasionally found, but it is as often absent, and has, on the other hand, been repeatedly detected in nerves that have been wholly free from neuralgia. It is impossible to account for the variety and complexity of the phenomena presented in cases of neuralgia, except by the supposition that there is in every case a central change, which is the one most important factor in the production both of the pain and of the secondary phenomena. Among the most important of the secondary phenomena are vaso-motor paralysis,—or vaso-motor spasm; an increase, diminution, or alteration in the secretions of glands supplied by fibres bound up either in the same branch, or in another branch of the same nerve, or in a different nerve, with which the painful nerve is connected only through the centre, or, possibly, only through a plexus; paralysis of parts supplied by the painful or a different nerve, connected with it only through the centre; loss of common or special sensation in nerve-fibres that run either with the same branch, or with another branch of the same nerve; and, lastly, trophic changes either in the direction of simple atrophy or of subacute inflammation, with proliferation of lowly-vitalized tissues (*e.g.* connective) in the parts which are supplied with sensation by the painful branches or by other branches of the same nerve. It seems hardly possible that changes so numerous and various as these could be produced by any alteration in the peripheral extremities of the nerves, and much more likely that they all have a central origin. While it can scarcely be asserted that Dr. Anstie has proved that the posterior nerve-roots are the parts primarily and principally affected in neuralgia, he has certainly brought forward a great deal of evidence in favor of this view. To the objection that might be made that neuralgia can scarcely be dependent on any changes analogous to those which occur in ataxy, because, while the former disease is in many cases, under proper treatment, curable, the latter is never so, he replies that the changes in neuralgia need not be permanent. Are we, he says, to suppose that the posterior nerve-roots alone of all the tissues and organs in the body are incapable of minute and partial changes in the direction of molecular death, which may be perfectly recovered from in weeks, months, or even days?

Neuralgia, if we understand Dr. Anstie's view, originates, as a general rule, in some peripheral irritation of a nerve, which, being conveyed to the spinal or cerebral centre of the nerve, gives rise to certain alterations which find their expression in pain.

An exciting cause, however, which is sufficient in one individual to give rise to neuralgia, will produce no effect upon another, showing that there exists in some subjects a marked predisposition to the disease; and this, like all other predispositions, may be inherited or acquired,—much more frequently than is generally supposed the former. The occasional occurrence of neuralgia in nerves connected with the irritated nerves only through the nervous centres, or at particular epochs of life, without any special exciting cause, shows that "neuralgics are, save in exceptional instances, *persons with congenitally weak spots in the nervous centres*, which break down into degeneration, temporary or permanent, under the strains imposed by one or other of the physiological crises of the organism, or the special physical or psychical circumstances which surround the patient's life."

Our notice has already been so extended that we have left ourselves little space to speak of Dr. Anstie's treatment of neuralgia, and must content ourselves with saying that he now recommends the use of the constant galvanic current, having had abundant opportunities to satisfy himself of its usefulness since he wrote his article in Reynolds' System of Medicine, in which, it will be recollected, he speaks somewhat cautiously in regard to it. We regret that we cannot do more than refer to his remarks on the subject of angina pectoris, which he believes to be essentially a neuralgia of the heart.

Dr. Anstie describes among the diseases that resemble neuralgia a peculiar condition dependent upon chronic alcoholismus. The pains which attend this affection resemble those due to neuralgia in many but not in all respects. Thus, while paroxysmal, and aggravated by bodily and mental fatigue, they never follow the course of a recognizable single nerve, but generally encircle the limbs near the joints, rather than run longitudinally down the extremities, are nearly always present in more than one limb, and usually in both halves of the body at the same time, and are far less promptly and effectually relieved by hypodermic injections of morphia than are the true neuralgias. There are also certain moral characteristics of the patient that often tell a significant tale. The drinker, especially if a woman,—and women suffer from these pains more frequently than men,—is slightly voluble, and full of plausible theories to account for this and other phenomena.

We regard the book as the best treatise on the subject in

the English language, and most cordially recommend it to the profession.

NOTE.—Since this notice was written, we have received an American reprint of this work, issued by D. Appleton & Co., New York.

PRACTICAL THERAPEUTICS. By EDWARD JOHN WARING, M.D. Second American from the Third London Edition. Philadelphia, Lindsay & Blakiston.

This American reprint of an English work is another instance of the disregard of the rights of authors that has built up the fortunes of so many American publishers,—a wrong which is a disgrace not so much to those who profit by it as to the government and the public opinion which allows it. The book itself has much that commends it, but at the same time is wanting in many things. It is in no sense a scientific work, and, in fact, its author would probably not claim for it any such position, but would state that he had simply attempted a compilation of all known "practical" facts in regard to the use of drugs, caring little for how or why medicines act, wishing to know only that they did so.

Dr. Waring's book is then, we take it, offered as a condensed statement of what are known or asserted by persons supposed to be competent to be the results of the exhibition of drugs,—a record of published facts gathered from books and journals; and the question for the reviewer is, How widely, thoroughly, and judiciously has the author garnered?

With English literature Dr. Waring appears to be most minutely acquainted; but the English medical literature is only a small part of the world's treasure, and in other fields than those immediately around him Dr. Waring has evidently been chary of wandering. Thus, in a list of some fifty-six works given in the front of the book as being afterwards cited, there is not a single German book, and but one French, and that was published in 1855. When we turn from the list of general works to the reference in the texts to journals and monographs, we find, in twenty pages taken at random, fifty-four English references, four French, no German, and no American.

It takes no perambulating Yankee phrenologist to discover that in Dr. Waring there is a truly English hyperplasia of the bump of veneration. Else how is it, in the sparing use he makes of foreign books, he holds so affectionately to editions venerable for age, forgetting that, whatever may be true of wine, works on therapeutics musty and cobwebbed with the dust of decades are not the compeers of their brothers fresh from the ordeal of the printing-press?

It is, no doubt, this most worthy and respectable regard for what is ancient and venerable which betrays our author into stating that veratria has been detected in veratrum viride, whereas modern editions of almost any of the American works on therapeutics would inform him that it was long since proved that veratrum viride contains no veratria.

We would not by any means condemn the book. In many respects it is an admirable work, full of good, terse, simple English,—full of facts crowded and jammed together almost as closely as Smyrna figs in their box,—redolent of the midnight oil of the study; yet it fails, after all, in the marks of the true, faithful student, eager for thoughts and knowledge, locked though they be in the strong box of an unknown and seemingly barbarous language.

Evidently our author belongs to the too large class of English and, to a less extent, American writers who were educated before it was the fashion to study the "barbarous German," and who have never overcome this defect in their early training. Truly, brother craftsman, thou dost go forth to thy work with but half thy outfit. Remember that thy workshop is a battle-field,—thy duty the conflict which hath for its wager human hopes and human fears, life and death; and if thou wouldst quit thyself manfully and push forward the battle, looking to the time when Death shall be driven back to the territory his own by birthright, thou must see to it that thy arms are well furnished, picked from the world's universal armory. More than this, if thou aspirest to a higher rank than that of him who wages the hand-to-hand conflict in the chamber of agony, how much greater is thy responsibility that no narrow view of thine weakens and hurts those thou wouldst lead!

THE TRANSACTIONS OF THE AMERICAN MEDICAL ASSOCIATION. Vol. XXII. 8vo, pp. 393. Philadelphia, Collins, Printer, 1871.

Judging from the contents of the volume before us, we should say that the proceedings of the last meeting of the American Medical Association must have been singularly devoid of scientific interest. The reports of the various committees are very commonplace, if we except that of Dr. F. W. Hatch on Epidemics and Climatology of California, which is written with great care, and will be found to contain much valuable information in regard to the prevalence of consumption in that State. When speaking of California as a health-resort for the consumptive, Dr. Hatch says that "at a stage of disease when relief may be with some reason hoped for, we regard our mountain-ranges, in the summer season especially, as among the most favorable of any to be found within the limits of the States, and as possessing advantages which commend themselves to the invalid as affording in suitable cases a healthful and safe resort." The few original communications are of no merit, excepting one contributed by Prof. Eve, and entitled "A Synopsis and Analysis of One Hundred Cases of Lithotomy and Lithotrity," which is valuable simply because it embodies the experience of so distinguished a surgeon as its author.

One prize was awarded to Dr. Edward R. Taylor, of California, for an essay "On the Chemical Constitution of the Bile," and the other to Dr. Benjamin Howard, of New York, for an essay entitled "The Direct Method of Artificial Respiration for the Treatment of Persons apparently Dead from Suffocation by Drowning or from other Causes."

Dr. Taylor cannot claim any originality for himself, for his essay is simply a résumé of all that is known of the subject of which it treats. Although it is well written, and valuable in its way, we cannot help regretting that it was not founded in part, at least, upon original investigation.

Dr. Howard claims for the direct method for performing artificial respiration several advantages over any other method hitherto proposed. In the first place, it is more effective; in the second, it is more easily understood, and more readily performed. We will give the description of the process in Dr. H.'s own words: "Turn the patient on his face, a large bundle of tightly-rolled clothing being placed beneath his stomach, and press heavily over it upon the spine for half a minute, or so long as fluids flow freely from the mouth. Place the patient on his back, the roll of clothing being so placed beneath it as to raise the pit of the stomach above the level of any other part of the body. If there be another person present, let him with a piece of dry cloth hold the tip of the tongue out of one corner of the mouth, and with the other hand grasp both wrists, and keep the arms forcibly stretched back above the head. Kneel beside or astride the patient's hips, and, with the balls of the thumbs resting on either side the pit of the stomach, let the fingers fall into the grooves between the short ribs, so as to afford the best grasp of the waist. Now, using your knees as a pivot, throw all your weight forward upon your hands, and at the same time squeeze the waist between them, as if you wished to force everything in the chest upwards out of the mouth; deepen the pressure while you can count, slowly, one—two—three; and *suddenly let go* with a final push, which springs you back to your first kneeling position. Remain erect upon your knees while you can count one—two; then repeat the same motions as before, at a rate gradually increasing from four or five to fifteen times a minute, and continue thus this bellows movement with the same regularity as is observable in the natural motions of breathing which you are imitating." This is to be continued for from one to two hours, or until the patient breathes. Although we think Dr. Howard has somewhat overstated the disadvantages of Silvester's method, it does seem to us that his method will be found effective under circumstances which would render all others impracticable.

CANCER: ITS CLASSIFICATION AND REMEDIES. By J. W. BRIGHT, M.D. Published by S. W. Butler, Philadelphia, 1871. 8vo, pp. 187.

This work abounds in unnecessary repetitions, its style often lacks perspicuity, and the statements are frequently conflicting. Thus, in the first chapter, cancer is described as a blood

disease, "an exudation of the peculiar blastema" from the blood-vessels, hence "the blood itself is in an abnormal state." In another chapter we are told that cancer-cells "are always local in their first appearance; and they never become constitutional except by absorption."

Throughout the book the author speaks of, and attaches a great diagnostic value to, the typical cancer-cell; even when obtained from the discharge of open sores, the microscope will often clear up all doubts. This dogma of the typical cancer-cell is considered as no longer tenable by modern pathologists, who now attach fully as much importance to the alveolar arrangement of the stroma of connective tissue as to the epithelial character of the cells aggregated in the alveoli. Dr. Bright, however, warns us against placing a too implicit reliance on the microscope; and he evidently does not use it as his only diagnostic medium, since he speaks of a characteristic cancer-smell, as well as of the characteristic cancer-cell.

The book is a compilation of the views of numerous authorities regarding the nature and treatment of cancer; to these are added the author's own experience, extending over a period of fifty years.

During the first half of this period, when the knife was resorted to in the treatment of cancer, not ten per cent. of his cases were cured. For the last twenty years, however, he has not lost ten per cent. of all his cases, and he has cured many who have remained well for years. This is effected by skilfully "combining ordinary remedies so as to triple and quadruple their powers." These potential and famous combinations are four in number; but, as they all contain chloride of zinc, and the last three are but different modifications of the first, we shall content ourselves with "No. 1: Solid extract of podophyllum (the root), one part; pure chloride of zinc, three parts; starch, one-fourth part; red saunders, one-fourth part; water sufficient to form a thick paste."

THE DRUGGIST'S GENERAL RECEIPT-BOOK, comprising a Copious Veterinary Formulary, with Numerous Receipts in Patent and Proprietary Medicines, Druggists' Nostrums, Perfumery and Cosmetics, Beverages, Condiments, Scientific Processes, and an Appendix of Useful Tables. By HENRY BEASLEY, Author of the "Book of Prescriptions," etc. Seventh American from the last London Edition. Philadelphia, Lindsay & Blakiston, 1871. 8vo, pp. 497.

Though from its title seemingly intended especially for the druggist, this book is quite as well adapted to the wants of the house- and horse-keeper generally, being filled with valuable receipts of every variety.

The Veterinary Pharmacopœia, or, more properly, formulary, is remarkably full, as is the portion devoted to miscellaneous preparations, from which last the good-wife may draw much useful information to the furthering of domestic comfort and economy.

Well and handsomely dressed, and furnished with a copious index, the work reflects credit upon author and publishers.

THE PHYSICIAN'S DOSE- AND SYMPTOM-BOOK, containing the Doses and Uses of all the Principal Articles of the Materia Medica and Officinal Preparations. By JOSEPH A. WYTHES, A.M., M.D., late Surgeon U. S. Vols., Author of "The Microscopist," etc. Tenth Edition. Philadelphia, Lindsay & Blakiston, 1871. 12mo, pp. 277.

This little work is already well known. To all in need of such a compendium it must prove valuable, the arrangement of the contained matter being well chosen and convenient.

BOOKS AND PAMPHLETS RECEIVED.

Anæsthesia, Hospitalism, Hermaphroditism, and a Proposal to Stamp out Smallpox and other Contagious Diseases. By Sir James Y. Simpson, Bart., M.D., D.C.L., Late Professor of Midwifery in the University of Edinburgh. Edited by Sir W. G. Simpson, Bart., B.A., etc. 8vo, pp. 560. New York, D. Appleton & Co., 1872.

A Treatise on English Punctuation; Designed for Letter-writers, Authors, Printers, and Correctors of the Press, and for the Use of Schools and Academies. By John Wilson. Twentieth Edition. 12mo, pp. 334. New York, Woolworth, Ainsworth & Co., 1871.

A Compendious Grammar of the Greek Language. By Alpheus Crosby, Professor Emeritus of the Greek Language and Literature in Dartmouth College. 12mo, pp. 370. New York, Woolworth, Ainsworth & Co., 1871.

Æsthetics; or, The Science of Beauty. By John Bascom, Professor in Williams College. 12mo, pp. 268. New York, Woolworth, Ainsworth & Co., 1871.

The National Composition Book. New York, Woolworth, Ainsworth & Co., 1871.

Bartholomew's Drawing-Book, No. 1, and Teacher's Guide, Companion to Drawing-Book No. 1. Woolworth, Ainsworth & Co., 1871.

(All of the above are for sale by J. B. Lippincott & Co.)

Annual Report of the Trustees and Superintendent of the State Lunatic Hospital of Pennsylvania. Harrisburg, 1871.

On Vascular Nævi, and their Treatment by the Actual Cautery. By B. F. Dawson, M.D., New York. Reprinted from *The American Journal of Obstetrics and Diseases of Women and Children.*

Mutual Relations of the Medical Profession, its Press, and the Community. By Dr. Storer, Jr. (Horatio), of Boston. Reprinted from the *Journal of the Gynæcological Society of Boston.*

Transactions of the Medical Society of the State of West Virginia. Wheeling, 1871.

Moderate Houses for Moderate Means. An Argument for Cheap Trains as Essential to Independent Homes for the Working Classes, etc. By Josiah Quincy. Boston, 1871.

The Physician's Annual for 1872. A Complete Calendar for the City and Country Practitioner. Philadelphia, S. W. Butler, M.D., 1872.

GLEANINGS FROM OUR EXCHANGES.

SMALLPOX STAMPED OUT BY SULPHUROUS ACID FUMIGATIONS.—Dr. J. Hjaltelin, the chief physician of Iceland, gives in the *British Medical Journal* for Nov. 4 a very interesting account of an epidemic of smallpox which occurred in some French fishing-vessels in the harbor of Reykjavik. The sick men, twenty-two in number, were removed to a large house situated about half a mile from the town, and placed in charge of a medical student and some nurses, none of whom were allowed to have any communication with people outside. The doctor, who is a firm believer in disinfectant and antiseptic remedies, determined to try sulphurous acid, both externally and internally,—externally, in the form of fumigations, by burning refined sulphur in the sick-rooms; and internally by giving sulphurous acid mixed with pure water. "The effect," he says, "was highly encouraging; and it soon became evident that, although the patients had at first a great aversion to the fumigation, and complained of the strong and pungent sulphurous odor, they soon felt the good effects of it, and they became so eager for it that I was obliged to restrain their eagerness a little, being afraid that their lungs might suffer. At the same time they got ordinary sulphurous acid internally, mixed only with pure water, the usual dose being about a drachm, mixed with an ounce of water, and this being taken every third hour. The result of this treatment was very satisfactory, for not only did the eruptive fever and the heat diminish, but in the milder form of the disease the vesicles dried very quickly, leaving the skin covered with thin brown scales, which soon fell off. Out of twenty-two patients treated in this way I only lost one; he was brought to the hospital in a moribund state, and expired about thirty-nine hours after his arrival. Amongst the patients thus treated, seven had confluent smallpox; and of these, three were in the fourth or suppurative stage when they came into the hospital, and four were in the third stage."

There is reason to believe that the sulphurous acid had a really destructive power on the smallpox virus, as in the following instance: "A carpenter had been taken into the quarantine in order to make some new beds for the patients, and remained there among the sick for some time. When he had done his work he was let out, after having been exposed to strong sulphurous fumigations. He was then outside under strict observation during fourteen days; and when no precursory symptoms could be observed in him, he was revaccinated with complete success, and had true vaccine pits a second time, for he had been vaccinated twenty years before." It may be added that experience has shown that the Icelanders are, no less than other people, extremely liable to the smallpox contagion. A frightful epidemic occurred in the island in 1707, which killed one-fourth part, or 18,000, of the inhabitants. Dr. H. says also that the fumes of sulphur are not, as generally supposed, irritating, that they may be inhaled with advantage in various bronchial affections, and that those who are exposed to them will be found to enjoy a wonderful immunity from attacks of influenza during epidemics of that disease.

The Removal of Morbid Growths from the Larynx by Section of the Cartilages.—Mr. Arthur Durham read a paper before the Royal Medical and Chirurgical Society (*Lancet*, November 25), in which he related in detail five cases, in each of which the operation had been performed in Guy's Hospital,—in three cases by himself, in one by Mr. Bryant, and in one by Mr. Colley. The result in four of these cases had been eminently satisfactory, free respiration and good voice having been regained. The remaining case was still under treatment. Appended to the communication were more or less complete reports of all the cases the author had been able to find on record. These cases were thirty-two in number, and, with the five detailed in his communication, gave a total of thirty-seven. In nineteen of these the operation might be regarded as having been completely successful, natural respiration and voice (though in some instances not normal in tone) having been restored. In seven partial success was obtained, respiration having been restored, but the voice lost or very seriously impaired. In four cases some temporary relief was obtained. In three the result might be considered negative, neither good nor harm having been done. The reports of at least two cases were incomplete. In two cases—and two cases only—death resulted. In each of these, however, the immediate cause was blood-poisoning. Metastatic abscesses were found in the lungs in one case; in the other erysipelas and gangrene occurred, and bronchopneumonia and exhaustive fever ensued and led to a fatal issue.

The Relations of Asthma, Angina Pectoris, and Gastralgia.—Dr. Anstie calls attention in the *British Medical Journal* for November 11 to the pathological and therapeutical relations which seem to unite these three diseases, making it evident, he thinks, that they depend on neurosis of the vagus, which is of central origin, and in the large majority of cases is mainly or entirely due to inherited peculiarities of the central nervous system. The evidence in favor of this view arranges itself under five heads. 1. Inferences from the known physiological functions of the vagus. 2. Evidence of the interchangeability of asthma, angina, and gastralgia in the same individual. 3. Evidence of the pathological connection of these neuroses with neuralgia of the fifth nerve. 4. Evidence of the common dependence of asthma, angina, gastralgia, and neuralgia of the fifth on peculiar inherited neurotic tendencies. 5. Evidence from the similarity of effects produced by certain remedies on all these maladies.

The Uses of the Uvula.—The *American Practitioner* for October 1, 1871, quotes from *The Doctor* the statement of the views of Sir Duncan Gibb in reference to the uses of the uvula, which was communicated at the late meeting of the British Association, held at Edinburgh. "1. It acts as a sentinel to the fauces in exciting the act of deglutition when anything has to be swallowed. 2. It compresses the soft palate and holds its posterior free border firmly against the wall of the pharynx in deglutition, so that nothing can pass upward. 3. It modifies speech in the production of loud declamation and the guttural forms of language, by lessening the pharyngo-nasal passage, when it acts as an elevator. 4. Its elevating power is increased to the most extreme degree in the highest ranges of the singing voice, and is very moderately exerted in the lower ranges. 5. Therefore, in its uses, deglutition and vocalization are the functions that are intimately associated with the uvula, and both become impaired more or less if it is destroyed, wholly removed, or seriously injured."

Extroversion of the Bladder.—Two cases of this deformity are recorded in the *British Medical Journal* for November 18. In one case Mr. Sydney Jones made a communication of about half an inch in extent between each ureter and the rectum, his object being to divert all the urine into the rectum. At a subsequent operation, an attempt to produce closure of the anterior orifice of the ureter was made. There was abundant evidence, before and during the second operation, of the sphincter ani being able to control the escape of the urine. On the day of the operation, as much as two ounces were passed as soon as the sphincter was relaxed by the introduction of the finger into the rectum.

In the second case, Mr. Bellamy performed the usual operation. Unfortunately, however, the superior abdominal flap sloughed away in consequence of the patient's incessant coughing from bronchitis after the operation. A second operation was performed, but the result is not stated.

Bromide of Calcium.—Dr. Wm. A. Hammond, in a note to the *New York Medical Journal*, calls attention to the bromide of calcium, which contains a large amount of bromine (every 100 grains containing 79.5 grains of bromine), and which in consequence of its instability and of the readiness with which it parts with its bromine is especially useful in those cases in which speedy action is desirable. It has a powerful hypnotic influence, and hence is particularly beneficial in cases of delirium tremens, or the insomnia resulting from intense mental labor or excitement. In the treatment of epilepsy Dr. H. does not think it possesses any advantages over the bromide of potassium or of sodium, except in those cases in which the paroxysms are very frequent, or in cases occurring in very young infants. It does not appear to cause acne to anything like the extent of the bromides in more general use.

Instruments for Distinguishing Lead from Bone.—The *Lancet* of Nov. 11 contains the following account of an instrument to distinguish between bone and lead: "The instrument consists of a pair of bullet forceps with blades electrically insulated from each other at the joint and connected by means of wire with a miniature pair of galvanic plates, one of the wires being coiled around the case of a compass-needle, thus constituting a small galvanometer. On the pocket instrument case to which this is attached being opened and so arranged that the needle stands parallel to the wires, the moment any metallic body is touched by the blades of the forceps, indication is given by a deflection of the needle, enabling the operator to know with certainty whether it is the proper object or a piece of bone he is touching. We may further state that this apparatus is inexpensive, and that it is contained in a common pocket case. The voltaic plates are only two inches square, and when wrapped in gutta-percha tissue their activity is preserved for weeks, and is easily renewed at any time by remoistening the woollen cloth between them with a few drops of acidulated water."

A Fully-Matured Tænia Solium expelled from a Child Five Days Old.—Dr. Samuel G. Armor reports in the *New York Medical Journal* for December the case of a child in whom trismus and other nervous symptoms were found to be dependent upon the presence of tape-worm in the intestinal canal. When the child was five days old, a sixth of a grain of calomel was given to it for the relief of these symptoms, and about ten hours afterwards the child passed two segments of the parasite. Anthelmintics were then administered, which caused the expulsion of numerous other segments, with entire relief to the symptoms. Some of the segments were examined microscopically by Dr. Segur, who reported that they unquestionably were part of a tænia. Two months after the birth of her child, the mother, who did not suspect the presence of tape-worm, and who was apparently in good health, was put upon treatment for tape-worm, taking, while fasting, the emulsion of pumpkin-seed. At the

end of twenty-four hours she passed over seventy segments of tænia.

Subcutaneous Division of the Neck of the Thigh-Bone.—Mr. W. Adams has recently (*British Medical Journal*, Nov. 4) divided the neck of the thigh-bone subcutaneously, in a case of bony anchylosis of the right hip-joint with extreme deformity. The patient was a young man, aged 18, who had suffered with fever (probably rheumatic) when eight years of age, and the joint afterwards remained contracted. Mr. Adams first made a punctured wound, a little above the top of the great trochanter, by an enlarged tenotomy knife, which was then passed directly down to the neck of the bone, and the muscles were freely divided and the capsular ligament opened. Mr. Adams then passed his small saw down to the anterior surface of the neck of the bone, and, cutting from before backwards, divided this structure. The division of the bone occupied seven minutes. After the neck had been divided, some resistance was still offered, apparently by some bone which had been thrown out in front of the joint. This had been felt at the commencement of the operation, but, on flexing the thigh, it rapidly gave way, and the limb then moved freely in all directions. Mr. Adams then divided the tendons of the rectus and abductor longus muscles, and also the tensor vaginæ femoris muscle.

The Changes produced in the Diameters of the Red Blood-Corpuscles by various Causes.—Dr. Med. Wjatscheslaw Manassein, in the *Centralblatt* for October 28, gives the result of some observations which he has made as regards the changes in size which the red blood-corpuscles undergo under certain influences. 1. Septicæmic poisoning of animals was accompanied by a diminution of their principal diameter in animals which have round blood-cells, and in animals which have oval blood-cells by a diminution of both the diameters which can be measured. 2. The diameters of the red blood-cells are diminished when the animals are subjected to a temperature higher than that of their bodies 3. The retention of animals in a space through which CO_2 is diffused causes a diminution in the size of the corpuscle. The same result is produced when a drop of blood is placed in a receiver with CO_2. 4. On the contrary, oxygen, whether inhaled or in a receiver, causes an increase in their dimensions. 5. Muriate of quinia in large or small doses, (6) cold, (7) hydrocyanic acid, and (8) alcohol in intoxicating quantities likewise cause an enlargement of the red blood-corpuscles, and so do all means by which the temperature of the body is lowered, except muriate of morphia; but this exception is explained when the influence of morphia upon the respiration centres is taken into consideration. 9. Finally, acute anæmia causes an increase in their size.

Poisoning by Petroleum.—In a case observed by M. Lugol (*British Medical Journal*, November 4; from *Rèpertoire de Pharmacie*, September, 1871), a woman, aged 40, swallowed a full glass of petroleum, with the intention of committing suicide. The pulse was small and thready; no nausea or vomiting; some epigastric discomfort. Magnesia was prescribed in abundance. In the evening there was a stool, on the surface of which swam petroleum, which was easily set on fire. Although the first symptoms were slight, gastro-enteritis presently set in, and death occurred on the twentieth day.

Glycerine Lymph.—In the *Boston Medical and Surgical Journal* for September 14 we find directions for the preparation of glycerine lymph by the Prussian *Reichsanzeiger*, which are substantially as follows: The pustules of a healthy vaccinated person are opened with a needle, and the affluent matter carefully removed by a lancet. The lymph is placed in a watch-glass, and there thoroughly mixed with twice its quantity of chemically-pure glycerine and as much distilled water. The mixture may be preserved for use in capillary tubes or small medicine-glasses, and is considered equal in effect to pure lymph, care being taken to shake it before use.

The Diagnosis of External Hydatid Cysts.—Bergmann (*Centralblatt*, November 4; from the *Dorpater Med. Zeitschr.*, i. 75–98 and 113–161) reports a case in which a hydatid cyst as large as the fist was mistaken and removed for a lipoma. The mistake in the diagnosis caused the author to collect the histories of one hundred and two cases, in ten of which the cyst was situated in the head, in nine on the neck, in nine on the side of the thorax, in fifteen in the mamma, in eighteen in the abdominal walls, in seven in the iliac and inguinal regions, in two in and on the testicle, in eleven on the upper extremity, and in twenty-one on the lower extremity. The patients were generally middle-aged. He recommends operative interference. The sac should be freely laid open, emptied, and injected with dilute or undiluted tincture of iodine, but it need not be removed.

Cirrhosis in Early Life.—Dr. Cheadle reports in the *British Medical Journal*, November 11, a case of cirrhosis of the liver occurring in a lad eighteen years of age, who had, however, been in the habit of drinking daily a small quantity of gin, undiluted with water.

Relation of the Tinea of the Cat to the Tinea of Man.—M. St.-Cyr (*British Medical Journal;* from *Veterinarium*, November, 1871) has shown that there is complete identity between the tinea of the child and that of the cat.

MISCELLANY.

Reunion of the Alumni of the Jefferson Medical College.—The Alumni Association of the Jefferson Medical College proposes to hold a social reunion during the meeting of the American Medical Association in this city in June next. The alumni of the College are cordially invited to attend. Those who contemplate being present are requested to send their names and addresses to either of the undersigned secretaries.

J. Ewing Mears, M.D.,
222 S. Sixteenth St.
R. J. Dunglison, M.D.,
636 N. Eighteenth St.

An Annual Exhibition for the Philadelphia Meeting of the American Medical Association.—The undersigned, Chairman and Secretary of the Committee of Arrangements of the American Medical Association, have been authorized to invite attention to the project of an exhibition of objects interesting to the medical profession, to be held in Philadelphia during the next session of the Association. This exhibition has been suggested as a desirable amplification of what has been customary on these occasions; and is expected to resemble, more or less, the displays of this kind which are prominent features of the annual meetings of the British Medical Association.

The aim of the committee will be, in this attempt, to provide for the practical and scientific entertainment of the members of the Association. Their design is to form a collection of instruments, apparatus, specimens, preparations, models, drawings, plates, books, and all other proper objects that may be obtained or presented in good time for the purpose; and so to arrange it for exhibition as to bring it under the convenient observation of every delegate and professional visitor. They hope, in this manner, without any sacrifice of the usual regard for their guests, to give to the arrangements as much of a professional character as may be in their power. Their desire is to aid in advancing the practical interests of the Association, by affording, through an always useful channel, some more direct means, as well as signs, of technical and scientific progress, as an attractive addition to the ordinary routine of written and verbal communications and discussions.

They cannot promise much success in a first experiment—undertaken at unavoidably short notice—beyond that of the

pioneer in preparing the way for something better in the future, in the light of experience, and with more time and opportunity for concerted action. The original intention was not to venture beyond Philadelphia and the neighboring cities in the search for material,—a restriction which seemed to be required by the limited space at the disposal of the committee, and the consequently greater difficulty of selection from the larger number of objects likely to be offered in answer to a general call. Nor was it doubted that a notification of the contemplated arrangement, to the societies and schools represented in the Association, would obtain sufficient attention to secure at least one object of the committee in encouraging a general desire to develop and produce the largest amount of illustration, as well as evidence, of professional improvement. Further consideration, however, has led to the present announcement; so that exhibitors from more distant parts of the country may have an opportunity to send their contributions,—mainly for the benefit, however, of the members of the Association, for whose especial information and entertainment the exhibition is to be prepared.

No mere display of local wealth and variety of means and appliances, or of individual superiority, will be encouraged beyond what is entirely incidental to the general purpose; nor will there be any attempt on the part of the committee to present representative or historical collections, although such collections may be cordially welcomed. Competition and completeness, therefore, are not to be expected. No special reports or comparative statements need be looked for; nor will the committee be responsible for the merits or demerits of the several objects exhibited, although obliged to exercise control as to admission and location. Novelty, recentness, and practical character will necessarily have weight in determining precedence; but not at the expense of whatever may be deemed especially characteristic or interesting, whether old or new. In a word, under their limitation of time, space, and means, they cannot undertake a general exposition or an industrial fair. Further and more specific details will be published as soon as practicable.

The committee confidently hope for encouragement and assistance, in an early practical response from their professional brethren, and from others who may have objects of interest to offer. They are bound to remind all concerned, however, that the contemplated collection must of necessity be, as much as practicable, select and characteristic rather than varied and extensive. It ought to be comprehensive, but can hardly be very full.

EDWARD HARTSHORNE,
D. MURRAY CHESTON.

THE CONDITION OF MEDICINE IN SPAIN.—A writer in the October number of the *Cornhill Magazine* upon the Social Condition of Spain says, "The state of the medical art and of the national health is, no doubt, one of the surest tests of a nation's civilization. The best Spanish physicians have studied at Montpellier and Paris. At home, they translate, as has been remarked, the foreign treatises, but their hospital practice is not good enough to form a body of skilled practitioners. It is true that the graduate in medicine is no longer forced to make oath that he will defend the Immaculate Conception of the Virgin, but there are customs hardly less absurd still existing. . . . Then the Spanish barber still bleeds, and the quack—the *pharmacopola circumforaneus* of antiquity—drives through the streets, on holidays, to draw teeth and sell drugs, amidst an admiring crowd. Nor is his practice, it may be presumed, much inferior to that of higher practitioners. Men leave Spanish hospitals with legs badly set and sores still sloughing. The diet is mean and miserable, and foreigners sink under it for sheer want of nourishment and stimulants.

"Yet Spain requires the best resources of physic and surgery, for the Spaniards are not healthy, if we take the nation as a whole. The muleteer, the peasant, the vine-grower, are brawny and brown, no doubt, and the climate, wisely used, is full of life and luxury. Madrid, on the other hand, is a city dangerous to health, and the towns of the Mediterranean are remarkable even for those diseases which we of the North seek their shores to subdue or to avoid. Thus, there is much consumption both at Cadiz and at the cooler Barcelona. The rural type degenerates in towns more rapidly than among ourselves, and in some chief cities the population is gradually declining. . . . To complete what we have said of the health of Spain, let us note the large mortality among children prevailing in the cities. This is due, no doubt, partly to hereditary feebleness, but partly also to bad sanitary conditions and obsolete modes of nursing,—an excess of swaddling and coddling, with a minimum of air, water, and soap. That noble sight, a British infant exulting in its tub, excites only a shuddering wonder in a Spanish mother. The Spaniards take many precautions about their health. . . . They are a great people for drugs, and buy large quantities of quack medicines from every region of Europe."

Since the above was in type, we have seen a statement by M. le Dr. Lucien Papillaud, the correspondent in Spain of the *Gazette Médicale*, which had also copied the preceding extract, that the assertions contained in it are almost wholly devoid of foundation, and that the medical profession in Spain will compare favorably with that of France and of England.

FROM the *Constitutionnel* we learn that it is proposed by the French government to decorate with the ribbon of the Legion of Honor all the German physicians and *internes* who gave aid to the wounded of the French during the late war. The Emperor of Germany has thanked M. Thiers for this, and will in return bestow the iron cross with the white ribbon upon the French physicians and *internes* who distinguished themselves by extending succor to the German wounded. The *Constitutionnel* is glad that the *internes* are included in these propositions, and pronounces a eulogium upon this class for their courage, devotion, and self-denial. The *Union Médicale* of October 3, while agreeing with the *Constitutionnel* as to the merits of the *internes*, thinks that their patriotism will interfere with their wearing the iron cross or deriving great pleasure from its possession.

PROF. STILLÉ has courteously given us permission to make the following extracts from a letter recently received by him from Dr. John E. Spencer, at present stationed at Camp Douglas, Utah Territory:

"I inclose you some tables giving the range of thermometer and hygrometer as taken from the 'Post Meteorological Report.' They are incomplete, owing probably to the carelessness of former surgeons here. The notes for 1870 are so imperfect as to be entirely valueless. The rain-fall has increased very much in the last ten years. This I suppose to be due to the vast amount of irrigation and subsequent vegetation. The mountain-streams, which formerly flowed

directly into the Great Salt Lake, Utah Lake, or Jordan River, are now divided into thousands of little streams, and water a large extent of country.

"I can as yet give no reliable information as to what diseases are the most prevalent here. In the camp for the last three months we have had an epidemic of what the inhabitants call 'Mountain Fever,' which seems to be an ill-defined intermittent of the quotidian and tertian types. It generally yields to quinine treatment. We have had twelve cases of typhoid fever, with three deaths. All the cases have been severe, and all have been in patients who have been under treatment for the so-called mountain fever. In some of the typhoid cases we tried the sulphurous-acid treatment recommended by Dr. Wilks in the July number of *Braithwaite's Retrospect*. I am told that vesical calculi composed largely of lime are very common here."

Camp Douglas, Utah. Latitude 40° 46′ 02″ *North. Longitude* 111° 53′ 30″ *West. Altitude* 4800 *feet.*

1868.	Thermometer.			Hygrometer.			Highest temperature.	Lowest temperature.	Rain and melted snow.
Monthly mean.	7 A.M.	2 P.M.	9 P.M.	7 A.M.	2 P.M.	9 P.M.			
January	20.4	31.2	18.1	17.2	29.1	19.2	43	5	3.13
February	21.8	36.2	24.1	20.1	35.1	23.2	64	5	.64
March	36.1	49.1	38.2	34.1	44.1	37.2	70	23	1.50
April	44.2	57.7	47.1	42.3	51.1	47.2	71	30	2.22
May	50.5	60.	51.5	49.8	58.8	50.	75	41	5.00
June	55.3	75.	64.	51.3	67.6	61.6	90	43	1.01
July	68.9	83.	73.	61.1	68.2	64.6	93	53	1.36
August	66.8	83.7	71.8	61.8	66.6	62.2	96	55	.20
September	57.5	73.7	62.8	52.	57.5	54.5	88	45	1.11
October	50.6	71.1	53.1	45.5	63.3	50.	81	34	.06
November	35.3	51.8	37.3	31.6	47.2	33.8	68	22	.03
December	27.3	43.	30.3	25.6	36.6	28.3	55	19	1.29
									17.55
1869.									
January	25.	38.6	23.	23.1	33.3	23.3	46	10	3.36
February	28.5	42.2	31.6	23.5	35.9	30.6	54	6	.47
March	37.3	47.5	41.1	34.5	44.	37.1	61	30	1.81
April	42.1	54.6	45.5	40.	51.5	42.	75	29	3.58
May	56.2	68.8	59.8	50.8	61.6	53.6	85	45	5.48
June	65.3	76.7	65.5	60.4	71.8	61.5	90	55	.22
July	71.5	80.3	70.7	58.7	64.3	62.6	97	57	.55
August	68.6	79.	72.	60.6	66.2	59.	91	61	.75
September	58.	68.8	57.4	49.9	56.	49.	87	37	2.00
October	47.3	63.2	51.2	40.9	49.6	43.6	75	37	.75
November	40.	51.	43.	37.7	45.3	40.	68	28	1.85
December	Notes very incomplete.								1.50
									22.32
1871.									
January	27.7	37.3	29.4	25.	33.6	27.2	62	8	1.60
February	28.4	38.1	31.	26.1	34.1	27.1	53	15	2.44
March	34.5	43.7	37.8	31.9	40.5	34.2	65	15	3.37
April	41 6	57.2	40.9	37.2	46.3	38.1	75	15	3.15
May	55.5	69.3	53.8	51.4	63.	49.2	82	40	5.00
June	69.1	84.1	69.2	59.2	77.1	63.	98	40	.30
July	73 6	87.9	71.9	60.7	69.6	62.2	102	50	—
August	70.6	85.6	68.3	58.1	64.8	54.3	105	56	—
September	70.	78.	76.9	54.9	61.7	53.	95	54	.10
October	47.8	56.4	47.4	39.9	46.6	39.3	70	27	.55
November	35.4	42.1	35.8	31.9	37.6	32.9	65	14	1.83
December									

Rain and Melted Snow.

Year 1863	7.47 inches.
" 1864	14.92 "
" 1865	17.56 "
" 1866	24.89 "
" 1867	24.60 "
" 1868	17.55 "
" 1869	22.32 "
" 1870	20.96 "

RESPONSIBILITIES OF PHYSICIANS.—In a recent trial in Ireland, the Lord Chief Baron finally laid down very distinctly what has always been understood by our profession as the rule of law,—that a surgeon is bound to bring to his task generally competent skill and *bona fides* with a view to effect cure, and that it is beyond the custom and province of a court of law, in a case of alleged murder, to enter into a minute technical discussion of the details of treatment, when it has satisfied itself that the surgeon was a competent and qualified person, acting to the best of his knowledge and in an upright intention to effect the cure of his patient or to give him a possible chance of life.

METEOROLOGICAL.—The following facts are derived principally from the *Evening Telegraph*. The mean temperature of the month of December, 1871, was 30°.88 Fahr. The highest temperature recorded during the month was 45°, on the 26th; the lowest was 2°.5 Fahr., on the 21st, which is also the lowest temperature recorded for the month for the past quarter of a century, and one of the lowest on record. The highest mean temperature on record for the month of December is 45°, in 1848; the lowest, 25°, in 1832. The average temperature of the year 1871 was 54°.99; 1°.39 above the average temperature of the past eighty-two years. Two months, March and April, showed a higher mean temperature than was ever before recorded for the corresponding months, while the month of December fell somewhat below the average.

The total rain-fall for the month was 2.26 inches; the average rain-fall for the corresponding month during the past thirty-four years being 3.92 inches. The total rain-fall during the year 1871 was 47.41 inches, being 1.57 inches more than the average rain-fall for the past thirty-four years.

ARTIFICIAL LIMBS FURNISHED BY THE GOVERNMENT.—According to the report of Surgeon-General Barnes, the number of mutilated soldiers who had received artificial limbs from the government previous to July 1, 1870, was 7887. By act of Congress, after that time applicants might receive either the limbs or a money commutation; and it is a singular fact that most of the veterans prefer to commute. Thus, against 104 who received arms we have placed 4067 who took the money; legs, 1117; commuters, 3114. Only 5 footless men took feet, and 51 preferred cash. It is more than likely, however, that a considerable portion of the money thus paid has been expended by the recipients in procuring limbs more to their liking than those furnished by the Department; or perhaps they believed that they could by a private purchase fit themselves better or make a better bargain; and those to whom the country owes so much have a right to the indulgence of their personal whims in such a matter. We hope that not much of the money was received only to be imprudently spent.

MEDICAL SERVICE IN THE NAVY.—The Secretary of the Navy has recently announced to the navy, in a general order, No. 164, that no assistant-surgeon will be examined for promotion until after he has served in his official capacity "at least two years on board of a public vessel of the United States at sea." This is in accordance with the letter and spirit of the law, which requires that the professional qualifications of candidates shall be ascertained by suitable examinations before they are appointed assistant-surgeons. The requirement of two years' service at sea prior to promotion, specified in the

act, is to test the personal aptitude for "life on the ocean wave," without which a medical officer is worthless in the naval service. Gentlemen who have been commissioned three years may be examined for promotion at the discretion of the Secretary of the Navy, provided they have been qualified by two years' experience at sea. At the expiration of five years' service they are legally entitled to be examined for promotion, if qualified by at least two years' service at sea.

THE ROOSEVELT HOSPITAL.—We extract from the *New York Medical Journal* for December, 1871, the following organization of this magnificent new hospital, which was opened for the reception of patients on the 2d of November. The portion of the building now open will accommodate one hundred and fifty patients, but when completed the hospital will have ample capacity for four hundred.

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Superintendent.—Dr. H. Paine.

House Physician and Surgeon.—Dr. Wm. H. Schuyler.

A NEW USE OF CHLORAL.—Hydrate of chloral seems to develop fresh virtues every day. A case of rattlesnake-poison has lately been cured by it, at Point Pleasant, New Jersey. A young man bitten by a rattlesnake, and exhibiting the usual violent and alarming symptoms, was treated with the hydrate, five doses of twenty grains each being administered, when sleep followed, and the patient awoke after several hours with every symptom of the poisoning gone.

REMARKABLE FECUNDITY.—A correspondent in the *Richmond and Louisville Medical Journal* reports the following case of remarkable fecundity:

A colored woman living at Spring Hill, Tennessee, not yet thirty-six years of age, has given birth to twenty-six children:

At single births, all living	7
Twin births in succession eight times	16
Triplets	3
	26

All the children of plural births died shortly after birth.

A BARONETCY has been bestowed upon Professor Christison. The *Lancet* of November 4, in commenting upon it, says, "Full of years, Sir Robert Christison still possesses a vigor of body and mind which ranks him with most of his younger colleagues, and which must enhance the public gratification of the dignity now conferred upon him, as likely to derive additional lustre from the prolonged life he may in all likelihood enjoy."

MORTALITY OF THE CITY OF PHILADELPHIA DURING 1871.—The deaths from all causes in 1871 numbered 16,993, being an increase of 243 over those in 1870. The number of deaths from phthisis during 1871 was 2233, which is very nearly in the proportion to the whole number of deaths of one to seven and a half. The number of deaths of children under five years of age was 7153, which is about 0.42 per cent. of the whole mortality. During 1871 the deaths from smallpox numbered 1879, of which 720 were of adults and 1159 of minors, 578 of the 1159 being boys and 581 girls. Of the total number of deaths from this disease, 1016 were males and 863 females. Up to the last of September only 47 had died from smallpox, and after that time 1832 died. If a deduction be made for deaths from this disease, as well as for stillborn children, numbering 875, the total deaths from other causes will be seen to be less than those of 1870.

MORTALITY FROM SMALLPOX.—The number of deaths from smallpox in Philadelphia during the weeks ending December 30, 1871, and January 6, 1872, were 453, of which 283 were of minors.

MORTALITY OF PHILADELPHIA.—The following reports are condensed from the records at the Health Office:

	For the week ending Dec. 30.	Jan. 6.
Consumption	57	59
Other Diseases of Respiratory Organs	52	57
Diseases of Organs of Circulation	12	12
Diseases of Brain and Nervous System	55	56
Diseases of the Digestive Organs	13	17
Diseases of the Genito-Urinary Organs	3	12
Zymotic Diseases	241	254
Cancer	4	7
Casualties	11	9
Debility	27	20
Intemperance	4	1
Old Age	17	12
Poisoning	1	0
Scrofula	1	2
Stillborn	22	24
Suicide	2	0
Tumors	0	1
Unclassifiable	14	14
Unknown	4	2
Totals	540	559
Adults	253	261
Minors	287	298

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM DECEMBER 19, 1871, TO JANUARY 4, 1872, INCLUSIVE.

FRANTZ, J. H., SURGEON.—By S. O. 479, War Department, A. G. O., December 30, 1871, granted leave of absence for thirty days, with permission to apply for an extension of sixty days.

BREWER, J. W., ASSISTANT-SURGEON.—By S. O. 225, Department of the Missouri, December 16, 1871, to report in person without delay to the Medical Director of the Department.

MACKIN, CHARLES, ASSISTANT-SURGEON.—By S. O. 473, War Department, A. G. O., December 19, 1871, granted leave of absence for sixty days from November 28, 1871.

CRONKHITE, H. M., ASSISTANT-SURGEON.—By S. O. 261, Department of the South, December 16, 1871, to proceed to Spartansburg, S.C., for duty at that post.

WILSON, WILLIAM J., ASSISTANT-SURGEON.—By S. O. 226, Department of the Missouri, December 18, 1871, to proceed without delay to Fort Union, N.M., for temporary duty at that post.